

DOMINION OF CANADA

Views of Members of the British
Association and others.

INFORMATION FOR INTENDING SETTLERS.

PUBLISHED BY THE GOVERNMENT OF CANADA.

WITH A MAP.



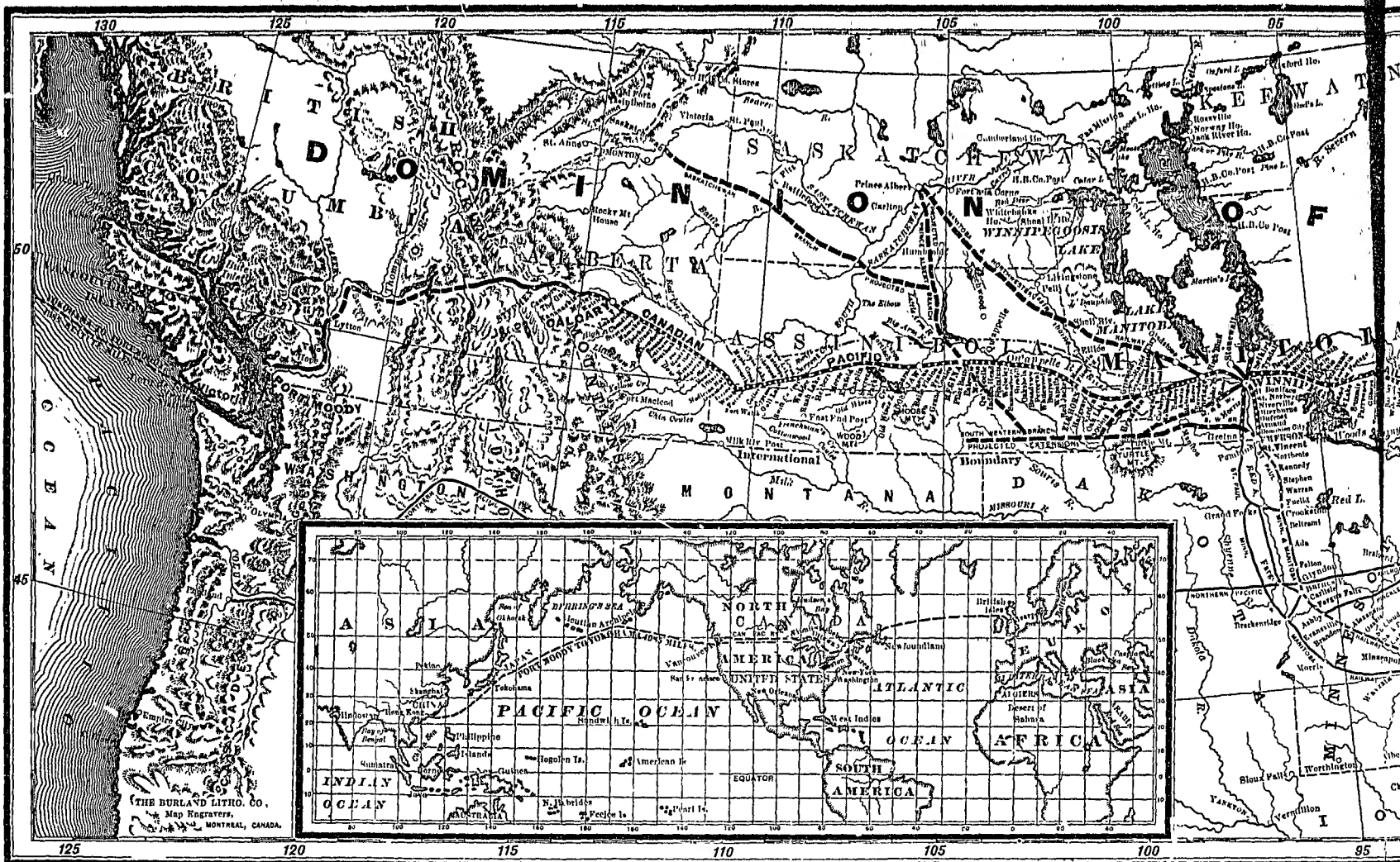
OTTAWA:
DEPARTMENT OF AGRICULTURE.

1884.

TABLE OF CONTENTS :

	Page.
INTRODUCTORY CHAPTER.....	3
ADDRESS OF THE MARQUIS OF LORNE.....	9
PROFESSOR TANNER'S REPORT.....	22
MR. R. H. ANDERSON'S LECTURES.....	40
LETTER FROM GEORGE RODDICK.....	46
REV. MR. BRYDGER'S OBSERVATIONS.....	47
LETTERS TO REV. MR. BRYDGER.....	48
CANADIAN NORTH-WEST—A SKETCH.....	49
ALBERTA—TESTIMONY OF SETTLERS.....	56
SIR RICHARD TEMPLE, PRESIDENT OF ECONOMIC SECTION OF BRIT- ISH ASSOCIATION—AN ADDRESS AT WINNIPEG.....	57

1884
(101)



MAP
OF
PART OF THE
DOMINION OF CANADA.



Table of Comparative Distances.

	Miles
Main Line - Montreal to Port Moody, via	
All Rail Route (under construction) -	2,998
From New York to Port Moody, via	
Brookville and Can. Pac. R.R. -	2,358
From New York to San Francisco, via	
Central and Union Pacific Railways, and	
shortest connecting lines through	
the United States -	2,821
From Vancouver to Montreal -	2,042
From Vancouver to New York -	2,451
From Vancouver to Port Moody, via	
Montreal and Can. Pac. R.R. -	2,451
From Vancouver to San Francisco, via	
shortest connecting lines in the U.S.,	
from Vancouver to Tacoma (Puget),	
via Montreal and Can. Pac. R.R. -	10,977
From Vancouver to Tacoma (Puget),	
via New York and San Francisco -	11,990
The distances, via the Can. Pac. R.R., are by	
the Rail and Lake Route, which will be in operation	
in the summer of the next year upon the opening of navigation in 1904.	

DOMINION OF CANADA.

STATEMENTS OF EMINENT MEN.

INTRODUCTORY CHAPTER.

VIEWS OF LORD LORNE—PROFESSOR TANNER—MR. ANDERSON—REV. MR. BRIDGER
MR. BRYDGES—SIR RICHARD TEMPLE—HON. ALEXANDER MACKENZIE—DR.
CHEADLE—PROFESSOR SHELDON—PROFESSOR FREEM—PROFESSOR MACADAM—
PROFESSOR GOLDWIN SMITH—PROFESSOR GILBERT, &C.

The following pages are mainly composed of republications and of extracts containing the testimony of well known men respecting the suitability of Canada as a field for settlement. In the first place, an address by the Marquis of Lorne, the late Governor-General of Canada, delivered at Birmingham in December last, is reproduced as containing the testimony of a disinterested and competent witness, who spoke from the stand point of having had large opportunities during his five years' residence in Canada, to fully ascertain the facts he stated. The position of the Marquis of Lorne is such, moreover, as to carry with it such a personal responsibility for his utterances as to be in itself a guarantee of the confidence, which few who read his clear outspoken words will hesitate to give.

Following the address of Lord Lorne, is republished by permission, a special report of Professor Tanner to the Council of the Institute of Agriculture at South Kensington. Professor Tanner came to Canada, as he himself explained, for the special object of making an inquiry into the advantages or otherwise of Emigration to Canada, more especially for the benefit of those, who, having been educated in the Institute, were able to command sufficient capital for farming profitably in this country. He did not come as a delegate at the invitation of the Canadian Government, but at the instance of the Council at South Kensington. His report is given in very clear and simple language, and is marked throughout by the painstaking industry which he is known to possess, and those who have read his very interesting books will not fail to accord to him their confidence. It is not necessary to make any further reference to this report.

Following Professor Tanner will be found some extracts from lectures delivered by one of the Tenant Farmer Delegates from Ireland, Mr. R. H. Anderson, late Manager of the Bank of Ireland at Portadown. These lectures are readable and sprightly, and we are sure many will feel obliged for their reproduction from the newspapers in the somewhat more permanent form of a pamphlet. Mr. Anderson's remarks as to the advisability of emigration from crowded centres of population to a country of the vast expanse of Canada where there is room for one of the greatest

developments of civilization that the world has ever seen, are well worth consideration, as well in the interest of the crowded populations as of the new country to be peopled.

Next are given some passing remarks of the Rev. Mr. Bridger, the Emigrant Chaplain in connection with the Parish Church at Liverpool. Mr. Bridger, it is well known, has taken great and intelligent interest in the direction of emigration to Canada, and has himself several times accompanied parties of emigrants, making himself personally acquainted with the movement, at and before embarkation, during the voyage, after landing, and after settlement, and the sum of his important and disinterested testimony is that, on the whole, the result is beneficial to all concerned—to the emigrant, and to the country which receives him. This view is strengthened by extracts from letters written to Mr. Bridger by some of the emigrants.

A Sketch of Manitoba and the North-West Territories of Canada, by the editor of this pamphlet is next given. This sketch is based upon personal observations of the writer, who has had, for many years, an intimate acquaintance with that part of the Dominion. This sketch briefly describes the progress of the trans-continental railway—the soil and productions of the North-West—the much misunderstood question of climate—a statement respecting the soil, furnished by Sir John Bennett Lawes and Dr. Gilbert, whose careful experiments at Rothamstead have everywhere attracted public attention, together with statements respecting the important subjects of water and fuel, building materials and the mineral resources of the country.

A statement follows by Mr. C. J. Brydges, for many years General Manager of the Grand Trunk Railway system in Canada, and now Commissioner of the Hudson's Bay Company's lands at Winnipeg. Mr. Brydges is a man of recognized ability, and the result of his observations—made during two journeys, one three years ago, and one in July last—are certainly very striking.

Sir Richard Temple, the Chairman of the Economic Section of the British Association was of the party of the members of that body who went to the Rocky Mountains, and he expressed very fully, at Winnipeg, the impressions he had received. He stated that it was his belief that there was a grander future for the Canadian North-West than for any other part of the British Empire. And as the views of a man so able and so distinguished, and, it may be added, so disinterested, are of more than ordinary value, they are quoted at considerable length in another part of this pamphlet.

Among the visitors to the North-West of Canada during the past summer, was the Hon. Alexander MacKenzie, the Premier of the Canadian Government from 1873 to 1878. The views of Mr. MacKenzie, from the recognized honesty of his personal character, which is admitted on all hands, even in the warmth of the strife of parties, his well known shrewdness and sagacity, and also the fact of his experience and responsibility while for many years holding the office of Railway Minister, make his testimony worthy of particular consideration. It had been held by many persons, and particularly by those who opposed the policy of the present Government, that there was a serious question as to the suitability for settlement of the country west of Moose Jaw, between that district and the Rocky Mountains along the line of the Pacific Railway. On this point the testimony of Mr. MacKenzie is of particular importance, and the facts he has stated will be everywhere in Canada implicitly received, as they may also well be elsewhere. Mr. MacKen-

zie's visit was made in August and September last. He gave his impressions at a dinner in Winnipeg, and also to a reporter of the *Toronto Globe*. From the report published in that paper, the following is extracted:

"How did you find the crops along the line of the Canada Pacific from Winnipeg west?"

"The crops generally were very good, both in Manitoba and the territorial districts which I was able to visit. There was scarcely an inferior field to be seen. I found an impression prevailing in Ontario and also to some extent in Manitoba, that the district next to the mountains was not suited for agricultural operations on account of the alleged liability to early frost. From a personal examination of the country for a considerable distance around Calgary—especially the farms which have been occupied for some years by enterprising squatters, and also the government farm, I found that in this whole district the crops were uniformly excellent, and generally far above the average. I do not care to commit myself as to an estimate of the crops, but I should say that some of the wheat fields would yield somewhere between thirty and forty bushels to the acre; some of the oat fields would yield from seventy to eighty bushels, while the barley and pease were also excellent both in quality and quantity. The potatoes and roots of all sorts were very fine. A large portion of this district, indeed almost the whole of it, has been leased to ranche holders, and they very naturally try to continue the impression that the ground occupied by them is only suitable for grazing. This is manifestly a great mistake. The ranches at the moment interpose the great difficulty in the way of settling the country. I am not disposed to quarrel with the original proposition to devote the lands in the vicinity of the mountains to grazing purposes, as grazing is exceedingly good, and the apprehension was probably general that it would not be so suitable as land farther east for purely farming operations. Now, however, that it is ascertained that the land is eminently suitable for agricultural purposes or mixed farming, there is no doubt in my own mind of the wisdom of encouraging settlers and selling land to them rather than continue the ranching system.

One of the farms I visited, that of Mr. Livingstone, about eight miles from Calgary, in a south-west direction, has been occupied by that gentleman for over fifteen years, and another farm, occupied by Mr. Bouchier, has also been occupied for a number of years. Mr. James Glen has been on his farm for seven years. One of the latter gentleman's fields of oats, on the summit of the ridge, was the sixth crop sown on the same ground, and it was a very heavy one. I met with several other farmers farther down Fish Creek and in other directions, all of whom had the same story to tell about the alleged damage by frosts, and the suitability of the soil and climate for farming operations. I understand there is a provision in the ranche leases, providing for resumption by the government upon a certain notice, and my impression is that wherever it is found that the pressure of settlers to obtain lands in territory now leased to ranche-keepers becomes great it is more profitable to accommodate the settlers than to continue in the grazing business. The combined operations of a large number of farmers would undoubtedly result in maintaining at least as large a stock as the ranche-keepers maintain now. In other words, mixed farming would maintain a much larger population."

"Did you observe particularly, the capabilities for farming farther east, between Calgary and Manitoba?"

"I arranged to visit seven out of the ten experimental farms commenced by the Railway Company, to ascertain, first, the effect of the alkali deposits, which prevailed to some extent in some districts, upon cereals and roots, and secondly to ascertain what the result was in a general way of these farms, considering soil and climate. I observed throughout the whole length of the road that there was scarcely any poor soil to be seen. In quarters, notably between Medicine Hat and Moose Jaw, there was an appearance of dryness in the general aspect of the prairie visible, which was not apparent where the land had been ploughed. There is a sort of crispness in the grass in some places that would seem to indicate a prevailing dryness. This, however is not uniformly the case. What is known as buffalo grass, where it has a dry appearance, still continues to preserve its nutritious qualities, and cures as well standing as if cut. Such is the general statement, made to me by old

settlers. I visited seven out of the ten experimental farms, namely, those at Gleichen, 784 miles from Winnipeg; Tilley, 713 miles; Stair, 668 miles; Dunmore, 650 miles; Forres, 615 miles; Maple Creek, 596 miles; and Gull Lake, 546 miles from Winnipeg. The three not visited, although they were within sight, are those at Swift Current, Rush Lake, and Secretan, the latter being 442 miles west of Winnipeg. The whole of these farms cover a district of about 350 miles from east to west. The farms should evidently be taken as a test of the capabilities of the country for farming operations, and the suitability of the climate. I was careful to observe the quality of the crops, as well as the respective kinds. The wheat was uniformly a fair crop, not so heavy as some seen in the district around Calgary or in Manitoba, but would probably average from 17 to 20 bushels to the acre. One remarkable feature of the whole country is the number of stalks of grain from one kernel. In one instance we counted no fewer than forty-six heads from one root. The oats and pease yielded a fair crop, while roots, such as potatoes and turnips, showed quite as good a result as on any of the farms in better known districts of Manitoba. On several of the farms I observed tomatoes (in one case nearly ripe), melons, cucumbers and citrons. The district embraced by these experimental farms covers the larger part of the district generally believed to be more or less arid in its character, and subject to alkali deposits. Alkali, however, is found in the Province of Manitoba as well as in the North-west and western districts. In the vicinity of Brandon, for instance, I observed considerable portions of the fields showing traces of alkali deposits. The uniform testimony of those who have cultivated the lands where alkali prevails is to the effect that it is worked out of the land after a few croppings. Some authorities, notably Prof. Macoun, maintain that it does not at all injure the land. On the whole, my impression is that a very much smaller area than was generally believed will prove to be unproductive as far as the soil is concerned.

"Water, climate and fuel largely enter into the question of its adaptability for settlement. As to the climate I am convinced that sowing early and properly taking care of the land will almost invariably insure a good early crop, but if the plowing of the land is insufficiently performed and the grain sown late in the season, there will be more or less danger of damage in the autumn. The grain on some of the experimental farms was sown on the 4th and 6th of June, days manifestly too late to be reasonably certain of the crops ripening early. Generally speaking, there is no reason whatever why early sowing should not be the rule. The question of rain-fall is a disputed one. I found many people who said that the rain fall this year was but very slightly in excess of the average, while some said there had been more rain than usual, although during my visit I saw no signs of recent rains. My impression is that in some few districts there will be some difficulty at first in securing the best quality of water for household use, but the same difficulty exists in some counties in Ontario where clay prevails. In some cases this will have to be overcome by sinking wells, or by forming tanks for the reception of water, or both. Very few wells have been sunk so far, but in most of them water has been obtained. The railway company has, however, failed in several cases to get a sufficient supply of pure water for the engines at their stations. The district supplied by the Bow and Belly Rivers and their tributaries, including the South Saskatchewan, as far at least as Medicine Hat, have an abundance of the best water, and the districts where groups of wood prevail, as round Qu'Appelle station and Moosomin, are, as a rule, abundantly supplied with good water. On the "Bell" farm an abundant supply has been obtained by simply erecting dams across a small creek, and similar advantage can be taken of many creeks in the country at comparatively little expense. As to fuel, discoveries of coal deposits at various places would seem to secure an abundant supply at moderate prices. The Saskatchewan mine, about eight miles west of Medicine Hat, can supply coal at Winnipeg for \$7.50 per ton, and at corresponding rates at nearer points. The quality is not the best for locomotives, but it can be used mixed. The Galt Mines, 100 miles up the river, produce coal equal to Ohio. At present it is accessible only by the river."

After the sittings of the British Association at Montreal, in the beginning of September, a number of its members visited the North-West, going over the Pacific

Railway as far as the Rocky Mountains, and piercing them, passed the summit of the first divide to the Kicking Horse Pass. The views of these gentlemen, which would naturally command the highest attention everywhere, were freely expressed at interviews and in public speeches at various gatherings. A very few extracts from these will be made.

First, we quote from the remarks of Dr. Cheadle, the well known author of "North-West Passage by Land." This, his second trip, merely confirmed the impressions he had formed on his first. He said:

"It gave him peculiar pleasure to make this, his second visit. He thought the present visit would be productive of great good. It had once been thought that those territories were barren and snowbound. This trip would result in pouring upon the people of England a flood of evidence which would convince the English people of the fertility and productiveness of the country here. He had been able to witness grain of every description growing in the country. Excellent wheat ranging from 20 to 35 bushels to the acre could be found growing in the country. Besides its agricultural advantages, this country was rich in mineral wealth."

Professor Sheldon, of the Agricultural College at Downton, England, had also previously been in the Canadian North-West, and made a report on its resources which has been very widely circulated. His second visit, also, was entirely confirmatory of the favourable impressions he had formed on the first. He spoke in the highest terms of the Canadian Pacific Railway and its management, and said, speaking of the Excursion of the members of the Association:

"The journey had been a great success throughout, and the whole party had been delighted with the treatment they had received. He did not see how they could fail to be. The cars on the line were beautiful, but not showy, of most elaborate workmanship, substantial in build, and, in short, the best cars he had ever seen."

Coming to his impressions of agricultural capabilities, Professor Sheldon made the remarks which follow:

"As to the soil. A great deal of the country through which the line passes was calculated to be good farming land, that was, for wheat and oats. The chief drawbacks to the plains, in view of their becoming a stock-raising country, was the lack of shade trees and the scarcity of water. Both of these wants, however, might be remedied by planting trees and sinking artesian wells, to be pumped by windmill power. He believed that trees would grow all through the North-West. There was no doubt of that, as he had seen fine trees growing along the banks of the rivers. He saw swamps in many places, where willows and poplars of some size were growing. That was a proof that trees would grow. He conjectured that patches of trees once existed all over the prairies, but were destroyed by fires, the moisture of the ground in which they grew preserving those willows and poplars. One thing about the country was that it looked dry, that was its present appearance. But where he had seen the sod turned up and crops taken, on the experimental farms, the soil did not present that dry and arid look that might have been expected from the look of the prairie. It was a soil that retained a good deal of moisture, owing to its clayey nature. The foothills beyond Calgary was a lovely country, possessing a fine natural herbage, although the want of trees was a drawback. The land was rolling, almost hilly, with a smooth, that is to say, unbroken surface. That would give a good deal of land shelter, the best kind of shelter for stock. At the same time the shelter would be greatly increased if trees were planted on the knolls. Ranching ought to be a success there, as the land was good enough and so was the climate. To provide against the contingency of a severe winter which now and then occurred, ranchers should have artificial shelter for their stock in the form of sheds and also provide forage. Those were the two great wants in the winter season. The ranchers were, however, finding that out and attending to those wants. The country was well adapted for sheep and the ranchers should get some of the hardy breeds from England. The land was dry and the herbage of that nice short character

which sheep preferred. Sheep could find for themselves under the snow better than cattle, and would not need shelter so much, the climate being so dry that their fleeces would keep dry all winter and protect them from the cold.

"As regarded the Bell farm, it was a bold and a praiseworthy experiment, its object being to demonstrate the capabilities of the prairie soil for the growth of various crops, wheat, oats, flax and garden vegetables. As far as that was concerned, the farm was a success, though whether it was a fiscal success he could not tell. It had all the look of a paying place. As an experiment, the Bell farm was all very well, but what was wanted in the North-West was not huge farms, but a lot of small ones."

Perhaps it is as well to point out that the remarks in the first part of this extract have reference to the tract of country lying between Moose Jaw and the Rocky Mountains respecting which there had been a question as to adaptability for agriculture. None of what he calls the drawbacks of the plains as regards the water supply would apply to the more eastern portion of the Territory, and even as regards this, there is the fact of the state of things described by Professor Macoun, namely—that when these plains which appear on their surface hard and dry, are cultivated, they absorb the rain fall and retain the moisture instead of its being rapidly evaporated from the hard surface. These facts have been demonstrated by the experimental farms of the Canadian Pacific Railway, much to the surprise of those persons who were disposed to doubt the statements of Mr. Macoun. It is to be remarked, however, that, for ordinary settlers from the United Kingdom or else where, there are vast areas east of these lands which it would probably be advisable to settle first. Time and experience will soon solve all other questions.

Professor Fream, the Professor of Botany at Downton College, also travelled with Professor Sheldon, this being his first visit to the great prairies of the North West. Giving his general impressions, he said that "the agricultural capacity of the North West was something wonderful."

He went on to say "there was a power of good wheat growing land, and also good garden mould of a surprising depth. He had looked at one of the experimental farms at Gleichen and seen a lot of Black Tartarean wheat that presented a fine appearance. It looked particularly clean in the straw, much more so than in England, in spite of the wet season. Had seen useful forage plants growing wild on the prairie, but thought that the introduction of various species of cultivated grass would be a step in the right direction. And side by side with the settlement of the land belts of trees should be planted to keep moisture in the soil, to afford shade and break the force of the wind, as well as to relieve the monotony of the prairie."

And further. "The great thing that was required for the North-West was, in his opinion, a good thrifty people with a little capital. The proper sort of immigrant was the one who could command a little capital. The knowledge of farming required was very slight indeed at present. The settler should keep a few head of cattle, if only for milk and butter; poultry might be raised with little trouble, and pigs. The drawback was that the farmer was so taken up with his wheat crops that he neglected those little details that would make his life a much more pleasant one. Flower gardens would also add much to the beauty of the farms."

He continued "that he had many talks with the settlers and found them all pleased with their prospects. There were no expressions of regret made use of, and all expected to pull through the winter very well. He saw some excellent land around Brandon, and thought that as the country became populated such places as Rat Portage and Medicine Hat would become great resorts on account of their natural beauty and scenery."

Professor MacAdam of Edinburgh, the eminent chemist, who had before made an analysis of the prairie soil, expressed himself in the following very decided terms:—

"He had great faith in Canadian soil, because he had examined it carefully. What ever opinions he had previously formed about the crop-yielding power of the land in

this North-West, now that he had examined it personally, those opinions were strengthened a thousand fold. He was familiar with farming in both England and Scotland, and he would have no hesitation in saying that he would advise all the farmers to emigrate to Canada."

The well-known writer, Professor Goldwin Smith, also visited the North West this summer and gives his impressions of the country in the following terms:—

"To-morrow the Northwest will be the great granary; before long, if this string of provinces from ocean to ocean really holds together, it must be the seat of power.

"The purity of the air, and the long, level horizon might remind us of descriptions of Sahara; but beneath us, instead of barren sand, is one of the gardens of the earth, and the destined seat of a great civilization.

"Here no drum beats, no bayonets gleam, no sentinel's tread is heard; yet race, character, language, literature, institutions, will form the foundations of a British Empire which, unlike empires held by the sword, is destined never to pass away!

"The city wants lifting into the air ten or fifteen feet like Chicago. Some think it ought to have been at Selkirk. But the die is now cast, the population being reckoned at thirty thousand. Having grown so far, Winnipeg will continue to grow. It is with cities as with men! to those who have is given; a commercial centre with a ganglion of railways once formed, all things come to it—pleasure as well as trade. Henceforth great cities, drawing by means of railways from an extended area, will stand far apart. Winnipeg's nearest rival will probably be Brandon, one hundred and thirty-six miles off, on a site where the monotony of a prairie is broken by a pleasant river valley, while the surrounding country is very rich and the roads excellent.

"That the Northwest was a most magnificent country for wheat, and for cereals generally, could never be doubted; all doubt at any rate must vanish from the mind of any one who beholds its seas of waving grain. That the wheat is of the very finest quality is also an admitted fact."

MANITOBA SOILS.

PAPER READ BY PROFESSOR GILBERT BEFORE THE BRITISH ASSOCIATION, MONTREAL, SEPT. 2ND, 1884.

Dr. Gilbert read a paper, which had been prepared by himself and Sir John Lawes, "On some points in the composition of soils, with results illustrating the sources of fertility of Manitoba prairie soils." This paper was a continuation of one given at the meeting of the American Association in Montreal two years ago, entitled "Determinations of nitrogen in the soils of some of the experimental fields at Rothamsted, and the bearing of results on the question of the sources of the nitrogen of our crops." After referring to the results shown in that paper, Dr. Gilbert went on to say that they had made a large number of new experiments. They had found very much more nitrogen as nitric acid in soils and subsoils to the depth of 108 inches where the leguminous than where the gramineous plants grew. The inference was that under leguminous growth the conditions are favourable for the development of the nitrifying organism, and if this view were confirmed an important step would be gained towards the more complete explanation of the sources of the nitrogen of the *leguminosae*. Again the result showed that the soil contained less nitrogen as nitric acid after the growth of good crops of *vicia sativa* than where the shallow rooted *trifolium repens* failed to grow. This was further evidence that the *leguminosae* took up nitrogen as nitric acid. Another experiment afforded an illustration of the loss of nitrogen that the land may sustain in a wet season, and

to the benefits arising from the ground being covered with a crop which takes up nitric acid as it is produced; and obviously the effect will be the greater when that crop is a leguminous one. It may be considered established that much, at any rate, of the nitrogen of crops is derived from the stores of the soil itself, whilst it is highly probable that much, if not the whole, of the nitrogen so derived is taken up as nitrates. This led to the consideration of the second part of their subject, namely, the sources of fertility of the soils which were examined from Portage LaPrairie, the Saskatchewan district, and from Fort Ellice. They proved to be twice as rich in nitrogen as the average of arable soils in Great Britain, perhaps about as rich as the average of the surface soils of permanent pasture. Four other Manitoba soils were examined in greater detail. One was from Niverville, 44 miles west of Winnipeg, the second from Brandon, the third from Selkirk, and the fourth from Winnipeg itself. These soils showed a very high percentage of nitrogen; that from Niverville nearly twice as high a percentage as in the first six or nine inches of ordinary arable land, and about as high as the surface soil of pasture land in Great Britain; that from Brandon was not so rich as that from Niverville, still the first twelve inches of depth is as rich as the first six or nine inches of good old arable lands. The soil from Selkirk showed an extremely high percentage of nitrogen in the first twelve inches, and in the second twelve inches as high a percentage as any ordinary surface soils. Lastly, both the first and second nine inches of the soil from Winnipeg were shown to be very rich in nitrogen, richer than the average of old pasture surface soil. The question arises how far the nitrogen in these soils is susceptible of nitrification, and so becomes valuable to vegetation. The soils and subsoils were submitted in shallow dishes under proper conditions of temperature and moisture for specified periods and then extracted from time to time and the nitric acid determined in the extract. The periods were never less than 28 days and sometimes more. The rate of nitrification declined after the third and fourth periods. There was a very marked increase in the rate of nitrification in the subsoil: over the eighth period compared with the seventh, there having been only as much as a gram of garden soils containing nitrifying organisms added. This result is very striking and of much interest, affording direct evidence that the nitrogen of subsoils is subject to nitrification if only in suitable conditions, and the result lends confirmation to the view that deep-rooted plants favored nitrification in the lower layers. The public records show that the rich prairie soils of the Northwest yield large crops, but under present conditions they do not yield amounts commensurate with their richness compared with the soils of Great Britain which have been under arable cultivation for centuries. That the rich prairie soils do not yield more produce than they do is due partly to the climate, but largely to scarcity of labour and consequently imperfect cultivation, thus leading to too luxuriant a growth of weeds; and until mixed agriculture and stock feeding can be had recourse to, and local demand arises, the burning of the straw and deficiency and waste of manure are more or less an inevitable but still exhausting practice. So long as land is cheap and labour dear, some sacrifice of fertility is inevitable in the process of bringing these virgin soils under profitable cultivation; and the only remedy is to be found in increase of population. Still the fact should not be lost sight of, that such practices of early settlement do involve serious waste of fertility. A table was hung up showing the comparative character of exhausted arable soils, of newly laid down pastures, and old pasture soils at Rothamsted, and also of some old arable soils, of Illinois and Manitoba prairie soils, and lastly of some very rich Russian soils. From these results there could be no doubt that the characteristic value of a rich virgin soil, or of a permanent pasture surface soil is a relatively high percentage of nitrogen and carbon. On the other hand a soil that has long been under arable culture is much poorer in these respects, whilst the arable soils under conditions of known agricultural exhaustion show a very low percentage of nitrogen and carbon, a low relation of carbon to nitrogen. In conclusion, he said, it had been maintained by some that a soil is a laboratory and not a mine, but not only the facts adduced by the authors in this and former papers, but the history of agriculture throughout the world, so far as we know it, clearly shows that a fertile soil is one which has accumulated within it the residue of ages of previous vegetation; and that it becomes unfertile as this residue is exhausted.

THE MARQUIS OF LORNE,

(LATE GOVERNOR-GENERAL.)

ON CANADA.

VERBATIM REPORT OF AN ADDRESS BY THE MARQUIS OF LORNE AT
BIRMINGHAM, DECEMBER 4TH, 1883.

The great bugbear—for it is nothing more—present to the minds of many in contemplating a move to Canada, is the alleged great and trying cold of that country. This is a fear which is not justified by the character of the climate. The climate is exceedingly healthy. Fevers, which are only too common in parts of the United States, are unknown. Men attain to great ages; and where, as in the case of some English, and many of the French, many generations have lived on Canadian soil, we see the race more vigorous, if possible, than in the days of the first settlers. Cold it certainly is during five or six months of the year, but the cold is dry, and, except upon the sea coasts, is less felt than is cold here. The saying of the old Scotch woman is literally true. She wrote home to her people to say, "it was fine to see the bairns play in the snow without getting their feet wet." Throughout the winter the snow is dry and powdery. The Canadian seasons are very certain. It is sure to be steadily cold in winter and steadily warm in summer, and throughout the twelve months, a bright sun gives cheerfulness to the scene.

AN ABUNDANCE OF FUEL.

But, the cold being great for a portion of the year, the question of fuel is an all important one. Well, let us see if this is met by the conditions of the country. It is most fully met. What is known as old Canada—namely, Nova Scotia, New Brunswick, Prince Edward's Island, Ontario and Quebec—is a vast region of woodland, now largely cleared of forest, but having an abundant supply of wood for fuel within reach of every place man has settled or may settle. Enormous stores of coal are being actively worked in Nova Scotia, the output of whose mines is daily and hourly increasing, and is at present immense. You may see in the mines near Pictou galleries twenty feet in height, hundreds of feet below ground, worked in the solid coal. Therefore, as far as old Canada is concerned, there never was any lack of fuel. At first, when the new territories received their first emigrants, the question of the supply of fuel was thought to be more serious in those regions, for the timber line of firs and pines is crossed near Winnipeg; and although there is a vast semi-circle of such heavy woods to the north, the further end of which comes down south again at the Rocky Mountains, there is little but poplar in the belt through which the new railways had begun their progress. The lands were of what the geologists call the tertiary formation—that is, of a late age—and no very good coal could be expected. There were beds of lignite found, and these have been discovered in greater quantity of late; but the lignite, although very useful for household purposes, and giving fair heat when it is of good quality, cannot be compared with true coals on account of the quantity of water it contains. It was a matter of anxiety, therefore, to find better fuel. Farther westward it was known that the tertiary or recent geological formation, gave place to beds of an older character, and that the more ancient cretaceous formation appeared. In crossing the rivers which flow down from the mountains and cut their way through higher lands, rounded boulders of coal had been observed, and in some places the high bluffs were seen to be streaked with dark bands of color. And now it is proved that throughout a great area there are abun-

dant indications of the presence of coal; and, still better, the coal which has been seen cropping out in various localities has been tried and found to be excellent for all purposes. Numerous are the "claims" or spots of land already taken from the Government for the mining of the mineral whose value far outweighs that of gold. Sir A. T. Galt, recently High Commissioner to England, has a good force at work turning out as much coal as may be wanted. The railway engines already use nothing but the coal of the district. From north to south for a distance of four hundred miles in width, experts believe that coal in any quantity exists beneath the long undulating swell of the prairie. Even if we had not found this exhaustless supply, the settler in the North-West would not have had long to wait, for the railway would have brought him the coal of British Columbia. I shall not read to you the scientific report on the coals recently examined, but shall hand it to the reporters to place at the end of this lecture, as the facts are of much importance. Last week I heard from Dr. Dawson, of the Geological Survey, that one vein of coal near the railway, five feet thick, is undoubtedly anthracite, or the hard shining coal now only obtained from the United States.

EMIGRATING TO CANADA.

A word before passing to the general features of the country as to emigration. No one doubts that very many in our large towns can benefit themselves by moving. Very many in the country can do so also, although for my part, and speaking more in the interests of England than of Canada, I would rather see departures from the towns than from the country, for there are but few country districts whose population is too dense. In any case, what we desire is that the advantages of Canada should be known, so as to induce men to weigh them as compared with the United States. I from personal knowledge believe that Canada can more than hold her own in the comparison. In climate she has in her various provinces vast areas as agreeable to men of our northern races as any America can offer. Her soils are as rich, her Government is more free, and the opportunities presented, not only for making a comfortable living, but for the attainment of comparative wealth, are as good. Sudden fortunes, it is true, are not so often made, but on the other hand, there is far less poverty. There is an equality of fortune, taking the people as a whole, which can hardly be matched elsewhere. Opportunities for the killing of game are usually better than in the United States. All emigrants should go out in the spring. Now, taking first the inducements offered to emigrants who desire to procure manual labor. At present the Canadian Pacific Railway is offering good wages for navvies, and the cost of a passage is only £3. Any one knowing the trade of a blacksmith, a mason, a bricklayer, or willing to work as a hired man on a farm, is sure of employment. It is not so desirable for young men who wish to lead a town life. The town life as compared with country life, gives fewer opportunities, for the cities are, relatively to the population, small. The rural population is over 4,000,000, as against about 400,000 represented by the towns. I would, therefore, on all accounts, advise young men to look to a country life. If they have no experience of agriculture they should hire themselves out for a year. The position of such a man is by no means unpleasant. He shares the life of the farmer, and is treated as one of the family. For farmers there is the powerful attraction of homesteads of all sizes. I have known very many men who have succeeded well, and who have begun with nothing or next to nothing. But I should counsel all who contemplate emigration, and the taking up of farm life, to have, if single men, from £50 to £100, exclusive of the cost of the journey, and if married, from £200 or £250 to £500. There are good vacant places to be had almost anywhere. It was only the other day that Lord A. Russell told me of some good land near Halifax, Nova Scotia, to be had for a dollar an acre. In the North-West you can get 160 acres of excellent land for £2. The land regulations under which these grants are made are to the full as favorable as those of the United States, and in some respects are to be preferred. For women there is plenty of space and places, but the women who will succeed must be women who will work. They who wish to go out as teachers, governesses, etc., had best stay at home. The Ladies' Committee of the Women's Emigration Society of Montreal told me that they could at once place

1,000 girls of good character if sent out to them, and that the demand for them was so great that they would be sorry to see them go past Montreal on to Ontario. But the ladies at Toronto are equally solicitous to procure good servant girls, who are excellently well treated in Canadian families. Even this excellent treatment is not enough to prevent them from marrying, strange to say, and the demand for wives fully keeps pace with the demand of housewives for servants. Indeed, the number of girls who keep the first resolution they may have formed to get as far as Winnipeg is small indeed, if they loiter by the way to take up situations in cities along the road to the West. I have often tried to keep a household together when obliged to take them on distant journeys, but it is surprising to see how the female members of it are now scattered in happy homesteads stretching between New York and Victoria, British Columbia, a distance of 4,000 miles. In short this imported European article is so popular that no government has dared to fix any tariff rate upon it, but have been obliged to assist in getting it by giving assisted passages to women as well as men.

A RURAL SCENE IN NOVA SCOTIA.

Some of you may have read "Sam Slick;" if you have not I should advise you to do so. It is the story of a shrewd and enterprising clockmaker, who goes about Nova Scotia selling his wares and turning a penny to his own advantage,—but not always to that of his customers in the old province by the sea. In comparison with the push and go-aheadism of New England he finds the provincial people but slow-coaches, and declares they are always talking of doing a thing and never doing it. Since his day the character of the country and of the country people has considerably altered, and the railway may be seen ringing its bell and steaming through woodland villages and fertile meadows and rough forests, where even Sam Slick himself would not have thought it would be worth while to push a track. Before I speak at all of the newer regions of Canada I should like to tell you of the country you will first see, supposing you were to make a voyage to Canada; and, to show you how, without going far from England, and while keeping within the reach of the daily post, of the telegraph line, and of bi-weekly and tri-weekly communication with England, at a distance of only ten days' journey from here, you can find lands as fair and opportunities for settlement as great as any offered in America. Let us, then, take one or two scenes in each of the old provinces which are so easily reached. As John Bull, when he becomes a tourist, is always fond of getting up to the top of a hill to look around him, let me take you to the top of a steep isolated cliff at the end of a long ridge of volcanic rock which is covered with pine woods, and which overlooks a gulf of the sea on one side, and a fair, wide and green valley twenty miles in width, upon the other. If you wait until the tide ebbs you will see that it leaves a vast stretch of red sand, for the tide goes back very far. It will come back again over those sands with a rush which will send the waters up as fast as a horse can gallop, until it surges against a line of earth entrenchments like the Dutch Dykes, which prevent its further advance. If you look carefully upon the country mapped out beneath your feet you may see certain other ridges which look like old earth walls; farther inland, now, but just visible among fertile villages, orchards, and comfortable-looking wooden farm houses, generally painted white, and with verandahs running round them, and you would be right in supposing that these old walls are ancient dykes. Formerly the mighty tide of the Bay of Fundy, now restrained by the outer walls, swept up to them. These were made in old days—days which have been rendered familiar to many by the genius of Longfellow, who spoke of a time when the happiness of the old French Acadian dwellers in this valley had come to an end, and the war which had raged between England and France had touched them too, and had compelled them to leave to others the well-loved Grand Pre, or Great Meadow, which they had tilled in security for some generations. This valley is only two or three hours' distant by rail from Halifax, one of the winter ports of the Dominion of Canada, a port to which steam vessels from the Mersey sail every week. Its white farmhouses and its orchards are types of many others to be found in various portions of the Province of Nova Scotia, which is a Province singularly rich in varied geological formations, and having, with a little

gold, what is far more valuable than any gold field, great fields of coal. If wages were only as low in Nova Scotia as they are in England and Scotland, one of her ports, the port of Pictou, would soon rival Glasgow or Belfast, or London as a great iron shipbuilding port. There are mines as vast as those of Lanarkshire. Close to the water you may see veins of coal of twenty or thirty feet in thickness, and the galleries of the mine so spacious that full grown horses are always used, and the miner swings his pick, not crouched or cramped in a bending attitude, but standing at his full height. Close to the sea also, and close to the coal mines, are hills full of excellent iron ore. Around almost every town in Nova Scotia, farms may be had where the head of the family may be sure to have excellent schooling for his children, a church service exactly like his own at home to attend, and a ready market for any produce he may raise.

NEW BRUNSWICK.

Let me now take you across the gulf into whose rushing tides we have been looking, to its northern shore, and on, inland, past the ridges which shelter it from the sea, to another great valley, called the Valley of Sussex, in the Province of New Brunswick. Beautiful trees are scattered in groups such as those you see in an English Park, over meadow and cornfields bright and golden under the unfailing August sun. Here too you have beautifully situated lands for sale, because the young man who owned them has taken a fancy for wilder life and yet larger returns on the North-Western Prairie; and yet you wonder he could leave a place so enticing by its beauty, and so certain to give the comforts and requisites of domestic family life and of a civilized community, and as you go on down this valley to the south and arrive at another great harbor which is never sealed in winter, and which is surrounded by the buildings of the flourishing and enterprising town of St. John, you marvel yet more at the restlessness of mankind, so conspicuously shown by your own race, which seem never to be content unless it is browsing like a horse against the wind, and will go on moving westward until it knocks its head against the Rocky Mountains; and even then is not content, but wanders further westward yet until it comes to the distant Pacific shores, and there finding often that it cannot go farther westward without becoming seasick, returns by the nearest train again eastward. But there are fortunately many left who have not been invaded by the restless spirit, and who prefer their ease in older settlements, and are content with being the heirs of the labor of generations who have gone before them. Of such, perhaps, the listener may be one, whom I would ask to accompany me for a moment up the river which flows up the harbor of St. John, as far as the town of Fredericton at all events. This is a delightful little city, ornamented with magnificent willow-trees in its principal streets, and having a beautiful, broad, and clear-watered river running past its happy and cleanly houses. The settlers around here have excellent land and are mostly of British descent, but farther up stream you may see a most flourishing community of Danes, who finding all they want here, have, like sensible people, settled down, and have written to many of their friends and kinsfolk to come out to them and do as they have done. But New Brunswick's fair lands are by no means confined to the St. John and Sussex Valleys, but belt the whole Province along its seaward face wherever the forest has been cleared, or the rivers, filled with salmon and sea-trout, run into the narrow seas facing the fertile Island of Prince Edward, or northward into the bay whose summer warmth made the first French discoverers call it the Heated Gulf. It is often supposed that the winter of these maritime provinces makes it impossible for the farmer to do much during the winter—that during that season he is shut in by the frost and the snow. A great deal of snow certainly does fall, and the more the snow falls, the more certain it is that any crops will not suffer from severe frosts, but will be kept warm and well manured by it until in May it suddenly disappears, and the wondrously quick growth of verdure and of flowers takes its place. There is by no means nothing to be done in the winter, time. The animals have to be looked after and fed, the wood has to be cut and hauled in sledges over the snow; there is plenty to occupy one's time, and when there is a spare day or two for friendly visits to neighbors, or for the healthy amusements of that time of the year, the farmer, who has during the summer to work

from the early morning until the evening, is by no means sorry for the variety afforded by a little leisure.

ONTARIO.

Let us now look at a view in the great Province of Ontario, by far the wealthiest and the most populous of any province in the Confederation. It has two millions of people, chiefly descended from English and Scotch stock. We will, if you please, place ourselves on a height, not far from the famous whirlpool in the Niagara Rapids where poor Captain Webb recently met the death which it may be almost said he courted, for no living being has ever come from those rapids alive. The roaring river flows in a deep and wide chasm on our right, and we are standing on a ridge which dips down to lower land along the river side in steep cliffs fringed with cedar and other wood. A tall monument in the shape of a gigantic column crowned with a statue is behind us. This was erected in memory of General Brock, who gallantly led a force of Canadian militia and regulars against the steep heights on which were standing the Americans, who had crossed and got possession. It was necessary to dislodge them, and like most British attacks of former days, it was delivered full in front. The General fell at the head of his troops before the ascent had been begun, but they, infuriated at his loss, swarmed up and gained the battle of Queenston Heights. From where we are, and still better from the top of the column to which a staircase gives access, a wonderful view is obtained over the surrounding country. Looking up the river, we can see over wide stretches of orchard and woodland a vapor-like steam rising. This is the smoke spray ascending from the great falls. Looking down the river, we see it flowing a few miles farther on into a great wide stretch of water, whose horizon, blue and distant, looks as though it belonged to the ocean itself. This is the great lake of Ontario, which, great as it is, is among the smallest in that vast group of inland seas called the Great Lakes of America. Right and left along its shores the country has evidently been cleared of its forests, which only remain in picturesque groups, and is smiling with corn fields, apple and peach orchards, and pasture. Far away, thirty miles off, we may just discern the smoke as of a city, and the dim gleam as of many houses. This is Toronto, one of the most prosperous of the young cities of the continent. It has 100,000 people, is becoming the centre of a rapidly extending network of railways, and has an importance already great, and which must become far greater in the future. And what is the condition of the people occupying this great territory which, although it was reclaimed only eighty years ago from the primeval woods, is already as strong in population as some of the small European States, and is sending out its multitudes annually to people the Far West, while the places they have left are being filled by the settlers from the Old World? It is a people essentially British in character, having an intense pride in the successes which have hitherto crowned their efforts and blessed their province, and possessing a very perfect system of self-government, providing admirably for the training of its youth. There is not a school throughout its broad expanse which is not placed under the supervision of a master specially trained in the art of teaching at two great central institutions called Normal Schools at Toronto and Ottawa. Each district is assessed in a school tax, always cheerfully paid, and ensuring for all the children the benefits of a free education.

The Central Government has nothing to do with education in Canada. This is a matter which is entirely left to the Provincial Parliament, and regulated by them as they think best. With this universal assessment the rights of the Roman Catholic minority are carefully guarded. If at any place the Roman Catholics can show that they have a sufficient number of children to form the classes of a school, they receive an adequate amount for their separate educational establishment. No children are compelled to attend, but practically all do so, because men wish to obtain the benefit of the assessment they are compelled to pay. The universities of this land, although too numerous, are good, and the University of Toronto bids fair in time to become sufficiently wealthy to attract the best professors, and to be fully equal to the demands made upon it by the rapidly increasing numbers of students, who, after living in denominational colleges around, receive the benefits of its examinations.

Before quitting the old provinces let us take a look from another height, one of the most celebrated of all in story and in song, and for the real importance of its commanding position. We look down this time from no elevation guarded and crowned with verdure and forest, but from a great cliff circled with ramparts, and with a citadel fashioned, indeed, according to the ancient system of fortifications, with ditches, glacis, and rampart revetted, and wrought with heavy masonry, but yet even now, and against modern arms, a place of strength, and one overlooking all surrounding objects. Past us and below us flows a river with a flood hardly less rapid than that of the Niagara, and far wider, and bearing on its stream many vessels. Steamers are there from many a European port, and a large fleet of sailing merchantmen crowd the wharves and coves along their shore, where they are loading with timber. On a point of land formed by the wedge-shaped cliff, and along its flanks is crowded a considerable town, built chiefly of stone houses, whose roofs are covered with plates dipped in tin, which makes them shine like silver in the sun.

There are here many churches and religious buildings from which at morning and evening the sound of many bells rises. To the right the eye looks over leagues of country until it rests upon some low and distant hills, which we are told are near the American frontier. Parted by the great river, two miles wide, we see below the city, the northern shore upon the left shining green and gold, and dotted with many white houses against a background of mountains, whose azure coloring is often broken when the sun brings out in stronger relief some shining forest-covered slope, for all these mountains are covered with wood even to the very summits. A white patch in the cliff-line of the shore shows where a hill-torrent leaps over a height greater than that of the Fall of Niagara in foam to the sea-like river beneath. The scene we are looking at is that which met the eyes of Wolfe, before he fell in a moment of victory on the famous Plains of Abraham, and this fortress city is Quebec.

As you descend into the streets and listen to the talk of the people, you will hear sometimes an Irish accent, but as a rule the language spoken will be the tongue of Old France. It is not the speech of the Paris of to-day, but it is the speech heard among the fishermen who visit our English coasts from the neighboring shores of Normandy and Brittany. Their race, represented at the time of our conquest of Quebec, by a bare 60,000 of a population, counts now over a million and a quarter of population. Their increase is so rapid that they have invaded like a flood the old Puritan districts of New England, in many of which the Puritan Church and congregation have wholly vanished, to give place to the richer ritual favored by the Romish religion. The number of children in the villages is indeed astonishing. It is said that as it is the custom of the country to give the twenty-sixth part of everything to the Church, the twenty-sixth child of the family is often the portion of the parish priest! It is a thoroughly loyal and contented community—loyal to a system which respects the old treaties that in the conquest of the Province of Quebec assured to the French race their laws, their institutions, and their language. They demand little, and are not so restless as the people of our stock, who keep perpetually pressing westward in hopes of greater gain. It would indeed be a sad thing if all the people were to rush away to the west and leave the beautiful shores of the St. Lawrence depopulated. To be sure, the land will not now produce much wheat, and the crops chiefly raised are buckwheat, potatoes and oats, but all kinds of fruit belonging to a northern climate are grown. The French Canadian is a wise man to be content to remain in his home, in the country where the institutions he loves are carefully preserved, where the church in which he worships is ministered to by a priesthood singularly earnest and pure, and where he will not be disturbed by the competition of many Americans, English or Scotch. It is well for us that instead of being a desert the littoral of the St. Lawrence is garrisoned for us by a population so orderly, contented, hardy, and enduring. Among them also we find the toleration in religious matters (as shown in the education of the young) which prevails amongst their fellow-countrymen in Ontario. Here the Roman Catholics have a large majority, and even a more extended toleration prevails, for all Protestant denominations may have the school assessment devoted to their use if they have to provide for a certain number of children. There are districts in this Province where there are still a large

number that speak English, as for instance the portion of the country near the frontier of Vermont, known as the "Eastern Townships." The scenery there is singularly attractive, and its fascinations, together with the good quality of the soil, have been sufficient to prevent the exodus to the west which has been so remarkable elsewhere.

Yet, another city almost as beautifully placed as that of Quebec, is that of Montreal, often called the commercial capital, for it has the largest urban population of any. The ground here is not tossed about as at Quebec, but one solitary hill, covered with beautiful wood now formed into a charming park, rises out of the city, which spreads from the foot of the hill down to the banks of the St. Lawrence. The great tubular bridge, called after the Queen, spans the mighty river at this point, below a series of rapids called the "Lachine Falls." It is curious to think of the reason of this name. The first French navigators, wishing to reach Asia, sailed westward, and imagined that they had passed the dividing sea, and had arrived on some coast of China—hence the name.

A LOOK WESTWARD.

Now we must follow the prevailing fashion, and turn our faces westward. In speeding by the railway across Ontario, we see the blue waters of Lake Erie upon our left, and turning to the north arrive at the pleasant Ontario fresh water harbor of Collingwood, on the shores of another great sheet of water, the Georgian Bay of Lake Huron. An excellent steamer takes us on through a charming archipelago for a night and day, until by the narrowing of the waters we know we shall have again to make some change to reach Lake Superior, but a splendidly-formed canal on the American side (that is to say upon the Southern shore) allows us to pass into the greatest of all great lakes by water, and we are fairly embarked upon this great expanse, to traverse which two and a half days are necessary. The northern shore is seen to consist of rough mountain ranges, and we land at Port Arthur, situated on a singularly picturesque portion of the lake, with terraced rock islands of basaltic formation, forming a breakwater against the storms which lash the waters from the south.

Again we enter the railway cars, and after passing for 400 miles through a wooded and rocky region, we suddenly emerge upon the endless meadows of Manitoba. For miles and miles we now see the long grasses wave, and out of the treeless land rise the spires of the churches of the new city of Winnipeg. As we approach this creation of the last half dozen years we cross a river which, like the Tiber at Rome, rolls rapidly in a turbid, tawny flood. We see that it is joined within the limits of the town by another stream, not quite so large but equally muddy. These are the Red River of the north and the Assiniboine. Many speak as though the experience of farming in the Province of Manitoba dated only from yesterday, but this is not the case, for Lord Selkirk many years ago brought in a colony consisting of Scotchmen from his estates in the north, taking them by Hudson's Bay up the Nelson River to Lake Winnipeg, and then settling them not far from where the present city stands (then called Fort Garry) at a place named Selkirk. It is curious how few of the members of that force under Sir Garnet Wolseley which put down the Half-breed insurrection in 1870 seems to have been sufficiently impressed by the experience of the Selkirk settlers, for the soldiers were not desirous to take up the land allotment which was offered to every member of the expeditionary corps. Yet if they had remembered how the early pioneers had told them that the wheat grown on their land came to a total of over thirty bushels per acre in each year, and that these crops were raised giving the land a time of rest every fifth year only; if they could have realised within how short a time those places which they themselves had reached with so much toil by march and canoe portage through woods and endless lakes, would not only be reached by railways, but become great railroad centres they would not so carelessly have thrown away their chance of making a fortune. When I was at Winnipeg in 1881 the city had scarcely 10,000 people. Now it has 30,000, and although the exorbitant and extravagant prices given by speculators of small means for frontage on its streets in 1882, and the consequent necessary and inevitable depression, has for the last six months followed this excess of speculative zeal, the perma-

ment value of this city property must be maintained, and is one of the most certain investments.

THE MENNONITES.

You would be interested to see how some men who are not of our race, and who entered the country with but few of the appliances brought or bought at once by the English, Scotch, or Canadian settler, have found a prosperous home in the limitless meadows of the Red River. You see neatly-made houses covered with a heavy thatch scattered along often, near the railway line to the south, houses which are evidently occupied by farmers in comfortable circumstances, who have their cow-houses and other outhouses neatly arranged in order near their dwellings, and have hung on a pole in the centre of the rustic courtyard a bell, which is placed to summon the laborers from the fields for the noonday meals or when work is over for the day. If you go to their houses you will be hospitably welcomed, but the speech you hear is not your own; it is German, and yet these men are not Germans. Their history is a remarkable one. Their ancestors lived under the Great Frederick in Brandenburg, in Potmerania. They had taken to the tents of one Simon Menno, who preached, as did the great Penn, the founder of Pennsylvania, that war was a crime. He went further; for he would not suffer his people to take arms in their hands even for the purposes of civil order. The sect increased, but you may imagine how distasteful these maxims were to the cast-iron military rule of the conquering Frederick. He would have none of them. What was the use of a man who would not even become a policeman? And so away from home and kindred they had to go, and finding in the Emperor Paul of Russia a man who could value them as good agriculturists, and who invite them as such to his Courland provinces, they settled down as subjects of the Czar. But as their numbers increased so did also the military systems of the Great Powers; and where every man must be a soldier, to refuse to wear the uniform of the country is a neglect of the first duty of a citizen. So thought the Russian Government, and again these people were obliged to move, this time across the whole width of European Russia to the shores of the Sea of Azov, near the Crimea, where they were again allowed to settle upon lands in what at that time was little better than a Tartar wilderness. Here again they thrived and tilled and "replenished the earth," till "the desert blossomed like the rose." In recent times, however, the demand for military service in Russia has determined the Mennonites—for such is the name of this sect—to send pioneer colonists to make a greater name than any heretofore accomplished; this time to cross Europe and the ocean and half the continent of America, and have freedom beneath the flags of the kindred peoples who have fallen equal heirs to the grand liberty of the Far West. Some settled in Minnesota and some in Manitoba. Where the land on which any of their villages had been built needed draining they, with true German energy and thoroughness, and true Russian perseverance, set about the work, and nowhere will you see better cared for settlements, though perhaps on rather a humble scale, than among the Mennonites.

Most comfortable are the interiors of their houses, though the floor, amongst those who have recently built, is often only the hard-pressed earth; but there is a cleanliness about walls, floor, and furniture, which tells of the presence of an excellent housewife. China in a corner cupboard, and books in another, add to the appearance of the apartment. As the wood was scarce a few years ago where they were, they largely used straw as a fuel, and I was assured by one of the men, who, like all his neighbors, spoke excellent German, that they had never suffered in the least from any winter cold, having, with a very little wood and much straw as fuel, obtained more heat than they wanted in the house. Although subject to, and willing to obey the laws of the Dominion of Canada, there is practically no occasion on which these are enforced amongst them, for they have their own system of justice. A religious and God-fearing people, crime is rare, and when it occurs it is dealt with amongst themselves. The roads they have made from village to village, and their whole system of rural economy are excellent, and they form by far the most satisfactory instance of any aggregation in one place of men belonging to a foreign race. Their villages generally number from thirty to forty families, and it is their invariable custom on securing lands, to hold a council, at which they decide what portions

of all the lands belonging to each head of a family are best adapted to the growth of wheat, potatoes, and the various other crops. By this method all the wheat is grown in one large tract, and so also with the potatoes, corn, and other crops—in short, the land is treated as being the property of the community rather than of the individual. Out of this huge wheatfield, for whatever crop it may be, each family is assigned one long strip to be cultivated by that particular family, and when the harvest is reaped the whole result is "pooled," and divided equally between the families comprising the community. Their cattle also are all herded in common in one huge pasturage by a herdsman, who is one of the two persons to whom these curious people pay a salary, the bishop, the elder of the village, being the other. In the summer, all hands, the bishop and the children included, engage in the farm work. These latter are always dressed in clothes which, being of the exact pattern, even to the hats and bonnets of those worn by their elders, give them a very grotesque appearance, especially in the case of the babies. Of course in a country with such ample space as the North-West, and where, if they become crowded in one part they have only to move on and occupy another, such a system may be pursued with far less evil occurring from subdivision than in a little country largely peopled, as are many of the European lands. There is another foreign colony consisting of Icelanders who, however, have not had at home the experience which makes men successful in husbandry; the girls, however, make excellent servants, and many of them are now distributed through the households of Winnipeg in that capacity.

OUT ON THE PACIFIC RAILWAY. We will, if you please, move on westward, and take the line of the Canadian Pacific Railway. Excellently laid over flat or rolling prairie, a train can proceed at almost any speed; but as we proceed along the solidly laid track we can take some notes. At first, and until we reach the Assiniboine, on the frontiers of the Province of Manitoba, we see on our horizon-line, and usually nearer to us, clumps and lands of poplar wood. There are also many lakes, and lakelets—pretty ponds, few are so large as to be worthy of the name of lake; ponds where numerous wild fowl seem to be for ever swimming about among the rich reeds on the margin, ponds around which deep rank grass rises higher than anywhere else on the level summer meadows. There is many a tract where the meadow appears still untouched by the hand of man; yet it has long ago, depend upon it, been bought, and bought for a good round sum, and is now being held for a further advance in price. Why should a further advance be expected? The answer is simple. You need only look north, east, south and west, and everywhere you will see the wooden-planked house of the emigrant. Often a great patch of yellow wheatfield is bowing in the breezes; each train along the line you are following has, during the summer months, been carrying hundreds into Winnipeg, and hundreds away from Winnipeg to the West.

Hundreds more have taken the trails over the prairie, for points to which railway companies are already directing their attention, and to which lines are already projected or in process of completion. The arrival of yet more and yet more, and the consequent rise in the value of lands, is looked upon as a certainty. Last year 50,000 entered this land of promise, and this year it is probable that the number has been greater. Never was a railway better endowed for the purposes of its existence, for the Canadian Pacific Railway has about 25,000,000 of acres in this fertile belt, and of this vast amount they still at the present moment hold at least 17,000,000; and having the power to choose the good lands, and being able to reject those which may be inferior, they became possessed, when they undertook the line, of a land-fortune which, with the \$25,000,000 in cash, was a dower one of the richest ever granted. Some farming companies have accomplished wonders with the land they possess, although they have as yet had them only two seasons. For instance, on the lands of a company called the Bell Farm Company you may see plough-riggs three or four miles in length.

Before reaching the Assiniboine, we pass through two Manitoban towns—those of Portage la Prairie and Brandon. When I saw them two years ago there were about five hundred people in the one and thirty in the other; and now they have a population of four thousand and seven thousand. And now we come to the Assin-

Doine, and, crossing it soon afterwards, enter the territory of Assiniboin, and here we leave provincial governments behind us, and enter the genial but despotic rule of the Lieutenant-Governor of the North-West Territories, who with his council, governs a country as big as France and Germany. You will soon observe at one of the stations a fine-looking trooper, clean, soldier-like with white helmet and brass spike on head, scarlet jacket, and broad yellow-striped trousers, boots and spurs, carbine in hand. This is a member of the North-West Mounted Police—a force now five hundred strong, and having charge to keep order throughout the country between this and the Rocky Mountains. This cavalry regiment is well horsed and well officered, and woe to any whiskey-trader whose barrels may come within their sight, for, owing to the trouble which spirituous liquors are sure to produce amongst the Indians, as well as amongst the white settlers in the initial stages of a country's development, none are allowed. Enterprising traders bring them in carts from the south, and often an exciting race occurs between the horses of the trader and the police, who have a long stern chase to undertake, but who finally ride up with pistols presented and make our friend disgorge his goods, which are forthwith spilt upon the ground. The work which has to be undertaken by the members of this corps in winter time has hitherto not been light, for the detachments are necessarily placed where they can be available in case of any arrest being necessary of horse-stealers. Horse-stealing is a prevalent crime in those parts, where settlement is scarce, and where the manners and customs engrafted on the half-breed population by their Indian ancestors still obtain. The Western highwayman takes your horse—the most valuable possession he can obtain—and the summons may come at a moment's notice that a theft has been committed, and it may be necessary to send a party of men prepared to camp upon snow, and to follow up the trail of the marauders.

We will suppose such a theft to have taken place, and the depredators to be Indians of the Cree tribe. The officer and his party, after two or three days' hard riding, have overtaken the redskins before they can cross the frontier. Now is seen of what advantage reputation or prestige—a thing sometimes derided nowadays—is in preventing bloodshed and maintaining order. The officer finds the Indians camped and numerous. Without a moment's hesitation he rides through the lodges to the chief's tent. He enters, his handfull of men waiting in the meantime. He finds the chief, with his councillors round him, smoking in silence, and hardly daring to look at him. As he enters he says, through his interpreter, that he knows that horses not belonging to the tribe have been run off. Grunts and universal protestations that nothing of the kind has occurred proceed from the savages. The officer maintains his ground, says that he knows the horses and the camp, and that they must be at this bivouac before morning. Finally the chief says that it is impossible to give up the horses, that the young bloods of the camp would not allow him to do so even if he wished it. The officer now declares that the tribe will not be allowed to cross the frontier or move from the ground they now occupy until the horses are surrendered. He knows perfectly well that he could not enforce the demand; that the Indians are well armed, and that his own men would be cut off in a moment should hostilities commence. Yet a whispered consultation now takes place amongst the chiefs, and in a short while the promise is given that the horses shall be in the officer's hands before the morning. Out of the tent strides the officer, and sure enough at dawn the horses are brought to him. He insists upon the surrender also of the men who first took them; and he marches off with these men under guard back whence he came. The secret of his power is this: that the Indians know that the red-jackets mete out equal justice to white man and to red man; that a white settler would be punished in exactly the same way as the redskin for any crime he may commit; and that to set the Canadian authorities against the Indians will be for the Indians the cutting off of the only chance they possess of living in a country where they are treated with equal justice. It is confidently expected that in two or three years more the last horse-stealing expedition will have become a matter of history. But the force of mounted police will for a long time be found necessary, because their mobility and the ease with which they can move will be the surest guarantee that the evil-disposed among the white population shall not follow the old Indian customs.

ON TO THE ROCKY MOUNTAINS.

The train on which we are embarked still follows its course westward, and before long approaches the crossing of the great south branch of the Saskatchewan River, over which it runs along a well built bridge of wood. The stream is about two or three hundred yards in width, and is shallow, and when the water is low, much hampered with sandbars; yet navigation upon it for several months of the year is easy for flat bottomed vessels, and these are already transporting coal worked in the neighborhood of the railway crossing down the river. As it flows first eastward and then northward, if we followed it for four hundred miles we should come upon its junction with the great north branch, which is navigable to a point not far removed from the Rocky Mountains, and flows through a fertile country. But the train's course takes us not eastward, but westward still, and soon we pass into another great province, the province of Alberta. Here we shall probably see herds of cattle, for the Government has leased tracts of grazing land to companies, who have very successfully, within the last two years, introduced great herds, comprising beasts imported from the best stock in England. But a still more interesting sight may be seen a short way from the line, for a number of black specks, which in the distance look like ordinary cattle, turn out to be, on near approach, a small herd of buffalo. These are the last remnants of the enormous herds which used to range by the hundred thousand over these immense and undulating prairies. The numbers are so rapidly decreasing that it is rare now to see more than a few together, and it is their scarcity which has told so hard upon the Indians. He fed and lived upon the annual migration of these masses, and with their disappearance the material to make his home and to follow the chase for his support has gone, and he must now depend upon other modes of subsistence. To kill a buffalo is by no means a great feat. With his shaggy head upon his chest, a buffalo bounds along at a shambling gallop, but he cannot vie with the horse in speed, and a good Indian pony—and, still more, a Canadian or American horse, even weighted with a man upon its back—has not much difficulty in overtaking him. Horses seem to enjoy the chase as much as the rider, and will lay themselves in out-stretched gallop alongside the bulls, and allow the rider to discharge arrow after arrow or shot after shot into his shaggy hide. It is only when the buffalo is wounded that he becomes dangerous. He then stands bleeding from shots in his side, rolling his eyes and making short and frantic charges upon his enemy. The hunter, when mounted, is safe enough, but a man on foot may fare worse. Another wild animal of great beauty may in these tracts be often seen from the train—namely, the Antelope. In bands of from ten to forty, or even more in number, these bound across the line and scud away until lost in the undulations of the plains. Their skins are excellent for dresses, and are much used by the Indians, who display great skill in embroidering them with beads and with teeth of elk or wapiti. This beautiful deer, the wapiti—the greatest of its kind, and much like the Scotch red deer, only of far greater size—has become very rare in the North-west, but they still frequent the Rocky Mountains and other ranges westward.

CROSSING THE ROCKIES.

On speeds the train on which we are traveling, crossing one or two beautiful rivers, whose waters as we near the Alpine ranges are clear and of a beautiful azure color. All eyes are now waiting to see the first glimpse of the peaks through whose gorges we shall soon be passing. Look where yonder in the far blue distance are jagged teeth rising into the clear blue air. Glasses are brought, and it is seen that these are not clouds, but are really the serrated ridges of the Rocky Mountains. In a few more hours we reach Calgary, on the Bow River, and a gorgeous spectacle presents itself. For 150 miles we can see the giant forms of the Canadian Alps stretching to the North and the South, their summits covered with snow. Vast numbers of cattle are now visible; but we hurry on, and the forest, which we have so long left behind us near Winnipeg, again appears in scattered clumps of trees and pine; the land is swollen into great hills, and we enter the defiles. Above us rise enor-

mous rocky masses with precipices hundreds of feet in perpendicular height, and the train slackens its speed, for we are ascending a steep gradient. Higher and higher yet we mount, until the aneroid barometer announces that we have risen 4,000 feet above the sea level, and at last we are on the top and begin to descend; we have nearly crossed the continent, and are now commencing the descent, which will ultimately land us on the shores of the Pacific. But more mountains have yet to be traversed, and when we arrive at the bottom of the first great range, and cross the great Columbia River, we find that our engine has still hard work before it, and must again mount. Everywhere around us now the woods are rich, and the trees increase in size as we proceed. Some hours of ascent and the task is accomplished, and we again rush downwards until the second bend of the Columbia is crossed, and the still hilly but less formidable country is gained. Beautiful lakes are now seen shrined in their surroundings of forests, and then an upland region of grass flats, evidently refreshed by less moisture than those we have quitted, spreads out before us, and we are in the very heart of the Province of British Columbia, on the shores of a lake called Kamloops. And now the last stage of our journey has been reached, and it is perhaps one of the most remarkable in regard to the engineering difficulties successfully encountered by the railway contractors. Strong rivers, bounding with impetuous energy through tremendous ravines, seem to be our guides, for we follow their course. Faster and faster yet the torrent rages its way through the fastnesses of magnificent hills. We are told that the river we are now following is the Fraser, and that 150 miles from this it empties itself into the sea. The line now winds along immediately over this flood, creeping around the gigantic buttresses of rock which were too steep to give sustenance to the trees, and have only their ledges and summits covered with the deep green of the Douglas fir. More and more remarkable become the steep, needle-pointed summits thousands of feet above our heads, but the descent is no longer so steep, and after passing mighty groves, every tree in which rises to a height of 150 to 200 feet, we find ourselves on the shores of a deep inlet, and the water we see is salt water. We have reached the ocean; we have dropped down from cloudland to the rippling and sun-kissed surface of the great water, which can bear us, if we so will, to the shores of Asia.

IN BRITISH COLUMBIA.

Let us leave the railway and embark on the steamer, without any intention of proceeding on so long a voyage, but only with the object of reaching the great island of Vancouver, which lies like a long breakwater off the western coast. Let us look for a moment from its capital, Victoria, at the scene around us. A beautiful strait of landlocked sea is before us. Sixteen miles off, upon its farther shore, is the Olympian range, and the territory that we see is under the stars and stripes of the Republic of the United States. These ranges are to the south of us, and they tower for 7,000 feet above the sleeping tide; to the left, where they have become lower, a solitary mountain rises in a grand cone of white snow to a height of over 10,000 feet. This is Mount Baker, an extinct volcano, lying only a few miles from our frontier. But the foreground of this magnificent picture is British soil, and has, as the capital of the Province of which it is a part, a town named after Her Majesty. Blessed with a delicious climate, much resembling the most favored spots on the south coast of England, it is already, and will become to a far greater degree, the favorite neighborhood. Many white people have recently come to reside here, but in the streets of the flourishing little city you will see men whose language and color tell you that they are of Indian or of Chinese race. The Chinese, indeed are everywhere. They have made the railway for some hundreds of miles into the interior, and in every house many of the Chinese are servants. They are very jealous in maintaining the dignity of their special departments. It is said that if a lady employs a Chinese cook, the cook takes very good care that the lady does not intrude more than is necessary into the kitchen, and instances have been known where interference on the part of the white lady has produced enraged pursuit of her on the part of the Chinaman, who has armed himself with a heavy copper saucepan.

REPORT CONCLUSION.

But you will now have heard enough of the different provinces of the Dominion, for we have taken a view of each, and have spoken at some length on their different characteristics. They afford a great variety of domicile, and their rival claims to attention are being liberally examined and appreciated. Together they form a united country, for there is not any cause for discontent and quarrel among any of the members of this great family. They have a population of about five millions, and soon will possess a far greater number; indeed, it has been calculated that in all probability within the next hundred years they will have more people than we have in these islands to-day. They are thoroughly devoted to the connection which exists between them and the mother country, a parent land which has allowed to its children the utmost liberty. If it had not been so they would long ago have cast off the allegiance of which they are now proud, and which is so useful to them, and will in the future be of such value to ourselves. It is our duty to cherish and to foster to the utmost those feelings of regard and loyalty which they cherish for us, only because the union with us is one of perfect freedom. We must remember at home what a strong nation their descendants must become, and how it is for our interest to make them satisfied to live under the flag we serve, for commerce always follows the flag, and a greater commerce, both for them and for us, will be obtained by an adhesion to the sentiment which made them one with ourselves. Their countries offer to our youth, unable to find a proper outlet at home, an unfailing field for success. There is hardly a man who has left these shores and has cast in his lot with them who has not found it to his benefit. With the single exception of the comparatively few Chinese upon their Pacific slope, a number certain to decrease because the advent of the Celestials is not encouraged, their population consists of the elements which have made our own so strong, and exhibits the blended blood of the strongest European races. Almost everywhere our own tongue predominates and our own customs are observed. With the Dominion of Canada and the Australian continent in close relation to England, she need never fear that the proud position she has gained in the world can be shaken or even questioned.

NOTE—It should be explained that the foregoing publication of an address of the Marquis of Lorne, is from a newspaper report which has reached the Immigration Branch of the Department of Agriculture, at Ottawa. It is understood that His Lordship has since put his observations together, with more detail in the form of a book, which will contain his impression of Canada, during the time he was Governor General.

OTTAWA, April, 1884.

REPORT

UPON

CANADA,

BY

PROFESSOR HENRY TANNER, F.C.S.

SENIOR MEMBER OF THE ROYAL AGRICULTURAL COLLEGE; SENIOR EXAMINER ON THE PRINCIPLES OF AGRICULTURE
UNDER THE GOVERNMENT DEPARTMENT OF SCIENCE; DIRECTOR OF EDUCATION UNDER THE INSTITUTE
OF AGRICULTURE, SOUTH KENSINGTON, LONDON.

—o—
(RE-PUBLISHED BY PERMISSION.)
—o—

SOUTH KENSINGTON, October 1st, 1883.

TO THE COUNCIL OF
THE INSTITUTE OF AGRICULTURE.

MY LORDS AND GENTLEMEN,—My mission to Canada, which will be completed with the presentation of this Report, had for its especial object an enquiry into the advantages, or otherwise, which surround emigration to this colony, more especially for those who, having being educated in the Institute, are unable to command sufficient capital for farming profitably in this country. As a matter of fact, the utmost confusion had existed for many months in the minds of the agricultural public, and others who contemplated emigrating to Canada, as to the true position of affairs in that country. They had read the Reports of the Delegates of the British Farmers who had visited Canada, and those Reports showed very clearly that emigration, prudently carried out, gave unbounded facilities for securing a comfortable support, and for the accumulation of profits. The writers of these Reports were known to be persons possessing much practical experience, and thoroughly worthy of confidence. The issue of these important Reports was soon followed by a large series of letters, and other communications to the Press, giving most painful details of what were alleged to be the personal experiences of disappointed emigrants. When an explanation was sought for, as to this conflict of testimony, it was then asserted that the Delegates had been hoodwinked by Government officials, and taken to selected spots which did not fairly represent the districts in which emigrants would have to settle. It was also alleged that the kind and hospitable treatment they had received had influenced their judgments, and that their Reports were practically valueless in consequence. Statements such as these were received with just indignation by those to whom the Delegates were personally known. Hoping to throw some light upon this conflict of testimony, my inquiry took the form indicated in the following questions, to which this Report is intended as a reply:—

First: Why have we had such contradictory reports upon the condition of our emigrants in Canada?

Secondly: Can emigration to Canada be safely recommended; and if so, what facilities exist for the protection and general welfare of our emigrants?

CONTRADICTIONARY REPORTS.

As soon as it was known that I was about to visit Canada, in the discharge of these duties, I was favored with various communications warning me as to the difficulties and losses which had fallen upon settlers in that country. These were sent to me from Canada as well as from England, and the severest censures were passed upon those who had misled the public by highly-colored reports upon Farming in Canada. In replying to these communications, I asked for the names and addresses of any of these cases of unsuccessful emigrants, or any definite details which I could examine into on my arrival in Canada. I felt that these were just the cases which I needed, and I was therefore most anxious to secure this information. My correspondents were in every case unable to give me any such particulars, and my English correspondents could only refer me to certain Canadian newspapers for these instances of failure. Feeling, as I did, the immense importance of having these instances of failure before me, I renewed my applications for the same on my arrival in Canada, but here also the alarming incidents which had been described, could not be localized or identified so as to admit of examination on the spot, and I failed to obtain the details I so much desired.

I therefore proceeded on my tour through Canada, and by personal observation I have been able to form a very definite opinion upon the facts of the case. I may state that after my arrival in Canada I travelled fully 5,000 miles within Canadian territory, and that I had most favorable opportunities for coming in contact with settlers, not only in the older provinces of the Dominion, but in Manitoba, and even beyond its borders, in the Assiniboia District of the North-West Territories. Throughout the whole of this lengthened tour of inspection I found those settled upon the lands happy, prosperous, and healthy. After conversing freely with large numbers of these settlers, I am able to state that I did not meet with a single instance in which they were not fairly successful, contented, and full of hope for the future. They worked hard, it is true, but that labor was sweetened by the knowledge that they were improving their own property. Their personal requirements were easily provided for by the aid of a rich and productive soil; their families were growing up around them in the enjoyment of health, and without any anxiety being felt as to their future success in life. These facts, which came under my own observation, compel me therefore to state that the unfavorable reports upon Canada which have been published in this country do not fairly represent the condition of affairs in Canada. On the other hand, I am equally bound to state that the Reports of the Delegates are substantially correct and worthy of confidence, and that in my opinion there is no justification whatever for the attacks which have been made upon them. Under any ordinary circumstances I should have considered it quite unnecessary for me to render my testimony in support of the opinions given by the Delegates, because they possess the confidence of those who know them; but the present issue is one of national importance, and demands from me a clear avowal of my opinion. I have, therefore, great pleasure in bearing my testimony as to the side on which I believe the truth rests.

In speaking of Canada as I have done, I must not be supposed to represent it as an Earthly Paradise, from which disappointment, loss and suffering are excluded. Failures have arisen, and will arise, for men bring upon themselves here, as elsewhere, the results of their own imprudence and lack of perseverance, but these constitute an excessively small proportion of the cases existing in Canada, and they are quite exceptional in their character.

Such being the true position of affairs, it now becomes necessary for me to give some explanation as to the

CAUSES OF THESE CONTRADICTIONARY REPORTS.

Emigration may be compared to a stream of wealth-producing power flowing into a new country, and as there are zealous agents for various countries eagerly seeking to secure as large as possible of that stream, so we soon find the contest becoming sharp and active. In the early stages the work is generally fair and legitimate for the agents simply seek to place before intending emigrants the important advan-

tages of the countries or districts they severally represent. This is too commonly followed by a series of mis-statements as to the countries and districts which are represented by opposing agents. In order that the attention of emigrants may be secured to these mis-representations, it is found necessary to make them very pungent and very startling; otherwise little or no notice would be taken of them. In this way, rival agents, whose duty it is to turn emigrants from Canada, find that the best way for doing so is to give some heart-rending narrative of the miseries, and possibly the ruin which befall some emigrant who went to Canada. The person who is thus addressed cannot possibly judge whether the narrative be true or false, and thus in many cases he is led to believe that there must be some truth in the tale, because so many people tell him of similar difficulties and misfortunes. He appears to forget that for each Canadian agent, there will be ten or a dozen representatives of other districts.

One illustrative fact may be useful at this point; although it is but one of ten thousand. I shall have occasion hereafter to draw attention to the very successful settlement which has been established in the North-west of Canada, by the assistance rendered to her tenantry by Lady Gordon Cathcart. As the first detachment of her settlers were travelling to their destination, it became necessary for them to pass through a portion of the United States, in consequence of the Canadian Pacific being incomplete. In doing so they were met by a number of persons who were to all appearance ordinary fellow travellers. They urged them to remain in the States, whilst the extraordinary accounts they gave of the North-west of Canada filled their minds with disappointment and fear. Some said they could not escape the fearful floods of the spring, others assured them that they would be baked by the fearfully hot summer, whilst another group knew perfectly well that they would be frozen in winter. As they proceeded they gradually discovered the trick which had been played upon them, and they laughed at the doubts which had been so easily raised.

"And now that you have settled here, what do you think of the place?" I enquired of one of the party.

"Ah, sir," he reverently replied, "it is really a Godly country."

Incidents such as these are simply numberless in their variety and form, for there are large numbers of persons who are thus employed throughout the emigration season, and whose duty it is to persuade emigrants to settle in some other district than that to which they are journeying, and these agents are remunerated according to their success. In the instance which I quoted, the deception was attempted in the United States; but I need scarcely say that there is no monopoly of virtue on either side of the Boundary Line, for if it is six to one, it is half a dozen to the other. This class of misrepresentation is quite of the common rank, but the same object is carried out with greater delicacy and refinement when those of a higher grade have to be decoyed. Here also we find additional interests influencing the work, and whenever the full history is revealed of the correspondence upon Canadian matters which has this year caused so much anxiety and fear in Great Britain and Ireland, it will be a source of surprise to know how much of it was manufactured within half a mile of the London Stock Exchange. Let, then, a veil be allowed to fall upon the past, in the hope that a successful trick may not be repeated. The moral of the tale is clear, for it indicates that in future the acceptance of any such narratives of failure should be made dependent upon our knowledge of the persons making such statements. Communications which do not admit of their being tested and verified, should be regarded as worse than useless. I have before me at this moment one of the letters published in England in July last; it has not even an initial attached to it, and it is addressed from ——— Farm, Manitoba, under date of June 3rd. Now, considering that Manitoba is considerably larger than Great Britain, the address is singularly incomplete and unusual. I feel confident that the Press may be relied upon for securing emigrants from a repetition of the serious misrepresentations which have become so common during the last twelve months, and I will gladly render any assistance in my power in inquiring into any cases which may be referred to me.

Although my applications for the actual facts referred to in the newspaper narratives failed to bring me the information I desired, they brought me something in-

stead, for there was a general desire to be informed in whose interests I was going to Canada. I am free to confess that I felt somewhat indignant at these enquiries, as I regarded them as suggesting that I was entering upon the work as a partizan, rather than as an impartial observer, but as I proceeded with my investigation all this oversensitiveness was brushed aside, for I found personal and private interests playing so important a part in the matters I was brought in contact with, that I also found it essentially necessary to secure similar information respecting many of my would-be helpers.

It is with great satisfaction that I now turn from the first enquiry to the far more congenial task of reporting upon the agricultural capabilities of Canada, and the facilities which exist for the protection and general welfare of our emigrants.

EMIGRATION ARRANGEMENTS.

To the ordinary observer, the emigrant and those who seek pleasure or renewed health by a visit to Canada, appear to be following out their own pre-arranged plans without any external interference. As soon, however, as we look beneath the surface we discover that a very perfect system surrounds their every action, which, without friction or inconvenience, guards them from numberless unseen dangers, and secures for them many a comfort. In other words, passenger traffic by sea is regulated by a very complete system, whereby our voyages are made as safe and agreeable as other circumstances may render possible. It is just another instance of those unseen influences which regulate our path through life, of which we are too often indifferent because we do not feel their interference.

A proper inspection of the ship by a Government official is an essential preliminary which must precede the departure of any passenger ships from any of our ports. Provision is made for every berth being of a reasonable and proper size. Other regulations secure an abundant supply of good food and good water, whilst proper ventilation, medical necessaries, life boats, appliances for the prevention of fire, and a number of valuable conveniences calculated to make a voyage safe and comfortable are duly secured. A full and efficient crew is also made compulsory, and altogether the minimum requirements go far to secure health, comfort and safety to the emigrant and the tourist. It was my wish to see how far these requirements were actually carried out in practice. I had decided upon taking my passage to Canada by the Allan Royal Mail Line of steamers from Liverpool, and I therefore applied for authority to inspect the general arrangements for the voyage, permission for which was granted to me. I went on board with the officer appointed by the Board of Trade some hours before the other saloon passengers, and I witnessed the entire inspection. The intermediate and steerage passengers were individually passed by the medical officer, and I scarcely know whether I ought most highly to commend his unobtrusive, but careful observation, or his courteous manner of satisfying himself of their being in good health, and prepared for the voyage we were about to take with them. One family alone was rejected as medically unfit, and with heavy hearts they left the ship, but they were specially cared for on shore by Messrs. Allan Brothers & Co., and every provision was made for their comfort and early restoration to health. Such a separation of persons who are not in proper health for a voyage is a two-fold blessing, for those who need medical care can be most satisfactorily treated on shore, and it is a still greater blessing for those who might have suffered by the association. The crew also were passed by the medical officer, and this was followed by a thorough trial of their efficiency in launching the ship's boats. The inspection having been satisfactorily completed, the time soon arrived for the saloon passengers to come on board, but how few had any idea of the precautionary measures which had been carried out.

Life on board ship has been so often described under the luxurious conditions enjoyed by saloon passengers that it leaves little to be specially reported. We were a bright and merry party throughout, fully appreciating the excellent arrangements made on *The Peruvian* for our comfort. We had in Captain Ritchie a commander with whom it was a privilege to sail, and the domestic arrangements were admirably carried out by his chief steward, Edwin Hartnell. But beside those who were thus enjoying the luxuries of the saloon, there were many intermediate and steerage pas-

sengers, and I was especially anxious to inform myself as to how far these were treated with care and consideration during the voyage, and I was here also permitted to inspect any and every detail. When we cleared off from Moville, after taking in the latest mail from Londonderry, we numbered all told as follow:—

	Passengers.	Statute Adults.
Saloon,	76	= 71
Intermediate	33	= 29½
Steerage,	429	= 363
Crew,	103	= 103
TOTAL,	641	= 566½

One important rule I found adopted throughout the ships that whether the passengers were in the saloon, or intermediate, or steerage, all the supplies of food were of uniform good quality. I visited the steerage during the supply of their dinners. I found the bill of fare good; the food was well cooked, and distributed by well-trained hands, everything being scrupulously clean. I partook of their supplies, and I observed that all were allowed as much food as they could make use of. With rigid discipline the steerage and intermediate were kept thoroughly clean and good order preserved. I have here restricted myself to a description of those matters which actually came under my own observation, but I have every reason to believe that the care and comfort of our emigrants are jealously guarded upon all the first-class steamers which are engaged in their conveyance from Great Britain and Ireland to Canada.

But this official care of the emigrant does not cease at the end of the voyage; on the other hand, it is then greatly increased. We landed in Quebec (Point Levis side) on an extensive wharf adjoining the railway station. On this wharf there was an emigrant shed 300 feet long, affording excellent protection when the weather is unfavourable. Here we are brought in contact with an entirely new class of officials—the Canadian Government Emigration Agents. Upon these gentlemen important, and often very delicate, duties devolve, for they have to exercise a sort of parental care over any emigrants who are in difficulty, or who need either friendly counsel, or even money. Whilst these agents have to guard against imposition, it is their bounden duty to aid the emigrant in his difficulty, and they deserve the highest commendation for the kind and considerate manner in which they discharge their duties. In the case of a labourer who may have gone out to Canada intending to enter upon any work which may offer, the Government Agent can at once guide him to the class of employment he requires, and he will often pass him and his family on by railway to his destination. As the emigrants reach their respective destinations they find “homes” built by the Government, in which they can reside whilst arranging for going to their places for work. If any are ill, they are immediately put under the care of the Government Medical Officer of the station, and the Government Agent of the district has to exercise a watchful care over them, and render help if it be required.

If we take the case of emigrants of a better class, the same help is at their command, but they generally require assistance of a very different character. The selection of land is generally the first care of these persons, and for their aid a staff of “land guides” has been established. None are admitted to these positions of trust but those who are practically acquainted with the land and the farming of the districts within which they have to act. Thus the Government Emigration Agent having informed himself respecting an emigrant's requirements as to land, is able to guide him to the district most likely to suit his plan of operation, and he will also give him an order for the personal assistance of the land guide, whose duty it will be to escort him to the sections of land which are free for his selection. Whatever may be said of the great fertility of farm lands in Canada, every practical man knows perfectly well that both good and bad land may be found. There is an unlimited opportunity for selecting fertile land which will reward the industrious emigrant, but if he does not exercise common prudence, he will probably take land which will

disappoint his hopes. At any rate, the Dominion Government has acted with great consideration towards emigrants by establishing this valuable body of land guides, and a prudent man will avail himself of this important help.

In observing the various ways in which the Canadian Government aid and assist emigrants of all grades and classes, it is at first a source of surprise that Government officials should put themselves forward to act as such friendly helpers. We soon see the reason for this help being given, and it rests upon the recognition of this great truth—that as the general prosperity of the country is dependent upon the successful enterprise of a large number of individuals, so does it become a matter of national importance that each and every helper should be made a successful worker. The help is not given from any feelings of benevolence, but simply because it is found to be a profitable outlay by reason of the increased success which results. Year by year the facilities for emigration are rendered more and more perfect, and the intercommunication between Great Britain and Canada becomes increasingly simple. Amongst the saloon passengers who accompanied me on my voyage to Canada were several students from our English and Scotch colleges going home for their vacation. In the steerage there were workmen who had been enjoying a holiday amongst their friends in the Old Country, generally taking back with them some new emigrants. On my return to England, several of the sons and daughters of eminent Canadian families were coming over here for higher school education, all showing how easily the dividing line is passed for pleasure, as well as for duty. In the next summer the progress of emigrants to the North West will be greatly shortened by the Algoma route being completed, and it will be rendered more comfortable by the new Emigrant Sleeping Cars which are being constructed by the Canadian Pacific Railway Company.

IMPORTATION OF LIVE STOCK.

This is a work which is closely associated with emigration, and the manner in which it is controlled by the Government authorities demands a passing notice. The same parental care which is bestowed upon the emigrant, is equally experienced in his subsequent protection from the importation of cattle disease. About two miles from the Port Levis landing-stage at Quebec we have the Government quarantine grounds, which are situated around the fortifications, and occupy about 1,500 acres of land. Much of this land has been sub-divided into a series of paddocks varying in size from five to ten acres, each having comfortable shedding in which the stock undergoing quarantine are kept, and around which they are regularly exercised. No charge is made for the use of the sheds and paddocks, nor for medical supervision, but food and attendants have to be provided by the owners. The buildings are kept scrupulously clean and in good order, and the management is excellent throughout. The period for quarantine in the case of cattle extends over 90 days from the date of their being placed on board ship, and in the case of sheep twelve days have to elapse from the time of their being landed from the ship. The system is rigidly and strictly carried out under an admirable supervision, and at the time of my visit over 2,000 head of cattle were undergoing quarantine. The efficiency of the system is shown by the remarkably healthy character of Canadian stock, and by the preference given to this route for some of the more valuable stock which is being imported into the United States. In the interests of Canada this safeguard of her stock farmers will doubtless be jealously maintained, and it is to be hoped that her quarantine regulations will not be in the slightest degree relaxed, for it is almost impossible to over-estimate the advantages which they confer upon Canadian farmers. The authorities are evidently determined to do their best for preserving the priceless boon of freedom from cattle disease, and they deserve high commendation for the protection thus given to the herds and flocks of Canada.

THE AGRICULTURAL CAPABILITIES OF CANADA.

In order that clear and distinct opinions may be formed upon this important subject, we must in the first place realise something of the magnitude of the district spoken of, for upon this point popular ideas are extremely vague. In its total

area Canada is very nearly as large as the entire continent of Europe, and some of its provinces are larger than the territories of the Great European Powers. The variations of climate are equally remarkable; for we have in Canada every gradation of climate, from that of the extreme North of Europe with its districts of perpetual snow, to that of the sunny plains of France, Spain, and Italy, with their rich and luscious fruits and semi-tropical products. The soil also varies equally as much as it does on the continent of Europe. It will therefore be evident that those who speak of Canada as a country "fitted only for fur-bearing animals," give a very inadequate idea of the variations which exist in that great territory. The popular mind is no doubt influenced by the fact, that the views of Canada which are commonly met with in this kingdom are almost invariably winter scenes. It is perfectly true that those high festivals of pleasure and amusement are exceedingly enjoyable, and form a prominent feature in the incidents of Canadian life, but the public mind has become too greatly impressed with the idea that Canada is more remarkable for its winters than for anything else. Those who have enjoyed the rich, full flavoured fruits and garden produce of Canada, know very well that these indicate a luxuriance of growth and a summer climate well nigh perfect in its character. When we remember also that Canadian wheat produces some of the finest flour in the world, we may be assured that she has something more than her winters to boast of.

To give anything like a complete report upon the agricultural capabilities of Canada is beyond my present intention; in fact, it would involve lengthened labour, and many large volumes might be added to those valuable works which have already been published. To those who seek these details in a condensed form, I would recommend a perusal of the smaller official documents issued by the several Departments of Agriculture, including the Reports prepared by the Delegates, and especially that invaluable little book "What Farmers Say." If more thorough and complete information is desired, this may be obtained from the Annual Reports of the several Departments of Agriculture, the first-volume Report of the Royal Commission on Agriculture in the Province of Ontario, and Professor Macoun's work on Manitoba and the North-West. Here, as elsewhere, it is Facts on which the emigrant must rely, and by these alone he should be guided in his general arrangements. But whilst it forms no portion of my plan to add to these valuable Reports, it will still be my endeavour to draw attention to certain details which may be useful to those who think of emigrating to Canada. For this purpose I shall divide the several Provinces of Canada into three groups.

In the first district, we may associate the older settled Provinces of Quebec, Ontario, New Brunswick, Nova Scotia, and Prince Edward's Island.

Into the second district I have gathered the Provinces of Manitoba, Assiniboia, Alberta, and the North-West Territories east of the Rocky Mountains.

Besides these two districts, we have the Province of British Columbia, which naturally forms a perfectly distinct section, and which demands a separate notice.

DISTRICT No. I.

THE EASTERN AND SOUTH-EASTERN PROVINCES IN RELATION TO EMIGRATION.

These provinces possess many points of character in common, and yet there are variations which must influence the minds of emigrants. The entire extent of this district is about three times the size of Great Britain and Ireland, and the early work of colonization was chiefly kept within its boundaries. Here and there an exception may be found, but for all practical purposes we may thus limit the scene of the operations of our early settlers. As a general rule this was a richly wooded district, having a great variety of soil, and largely provided with rivers and inland lakes, giving great facilities for transport purposes. The labour of clearing these forests has been very great, and the perseverance shown deserves the highest commendation. At the present time we have a large number of prosperous farmers settled upon lands thus reclaimed from the forests, and a well-wooded country still surrounds these properties. Throughout the district much of the country compares favorably with many luxuriant portions of England, such as Kent, Herefordshire, and Devon, and although British farmers may justly criticise the still incomplete condi-

tion of some of the farms, they will not fail to recognize that these lands have great capabilities.

It does not appear to me to be in any way probable that emigrants will, for some time to come, select the unreclaimed forest land of this district, and give to such land the long continued labour which is necessary for bringing it into cultivation. But such forest lands will not be neglected, for there are many men experienced in clearing them—practical men who know thoroughly well how to carry out such operations, and how to dispose of the produce most advantageously—who still prefer lands of this class to any other. The work of reclaiming forest land will doubtless proceed, but it will be carried out by those who are specially qualified for doing the work profitably; still I think that very few of our ordinary emigrants will follow the example of those who landed in Canada twenty, thirty, and forty years back, and who commenced an attack on the forest without any hesitation. The farms which have been cleared of timber possess many advantages which will commend themselves to British farmers, who having been accustomed to the comforts and conveniences of life are unwilling to forego these advantages, and especially when they have young families growing up around them. In these districts there are a large number of farms which may be purchased at a small cost. On many of these farms there are good residences and convenient farm buildings, with churches, chapels, schools, good roads, and good markets within easy reach. The rough work has here been done, and these farms would soon become as well finished as the best in the old country, and for the class of persons to whom I have referred such farms possess many advantages. The conditions which influence the varied systems of farming in Great Britain and Ireland, are found to exist in this district with even increased distinctions. Thus we have some districts especially suited for raising stock and for growing oats of superior quality, others in which stronger grazing land is found and on which good wheat is produced, whilst in other parts some splendid barley and sheep farms are found, and further south Indian corn and the choicest fruit are brought to perfection. Thus there is a far greater choice of districts for any special system of farming, and a greater certainty as to the character of the climate.

The question will naturally arise, how is it so many farms can be purchased in this district, if the conditions of success are as great as they are represented to be? I think a satisfactory answer may be given, at any rate it shall be a correct reply. The work of improvement, which has been carried out by the emigrants of fifteen or twenty years back, has accustomed them to pioneer life, and having accomplished one task they have less hesitation in seeking fresh opportunities for improving land, especially if they have any particular inducement for doing so. In many of these cases the sons have grown up on the original farm, and the time has come for settling them in business upon farms of their own. Settlers of this class seldom think of again attacking forest land, as they had done in the days of their youth, but they generally prefer the much easier work of the prairie. The consequence is that as they sell their farms they migrate to the North-west, and settle themselves and their sons upon farms in that district. To these hardy and experienced pioneers such a change does not involve any hardships, whilst their successors prosper on the farms which had been reclaimed for their use. The progress made in their original work of reclamation, is even now illustrated by some very unattractive sketches, representing the farms on forest land as they are said to have appeared at the end of five, fifteen, and thirty years. In these days, however, we look for quicker returns, and recent experience in Canada shows that it is attainable.

The practice of farming and the management of live stock has greatly improved in this East and South Eastern District during the last ten years, and in no part has that progress been more marked than in Ontario. No one can read that admirable Report of the Royal Commission upon the Agriculture of Ontario without feeling how much has been done in the past, and how great are the opportunities for the future. The work done by that Royal Commission is of priceless value to Ontario, and will aid its material progress in the early future. The action of the Provincial Government in the establishment of the Ontario Agricultural College at Guelph, is another instance of their watchful care over the advancement of agriculture. I had favorable opportunities for inspecting that college and its farm of 550 acres. President Mills and an able staff of professors are there carrying out an admirable course

of instruction, one which is pre-eminently of a practical character, and especially suited for a colonial farmer. There were 206 students under instruction last session, and many were excluded for want of accommodation. It would be difficult to form a full estimate of the pecuniary advantages resulting to Ontario from this State-aided institution, but I have no doubt whatever in my own mind, that there is no money spent by that Provincial Government which makes a more remunerative return than that voted in support of the Agricultural College at Guelph. I have elsewhere made reference to the almost paternal care of the Dominion Government in the advancement of agricultural interests; but it is a pleasing duty to notice the fact, that the various legislative bodies in Canada (whatever their political bias may be) recognise the fact that those engaged in the culture of the soil are producers of wealth for the Colony, and therefore deserve well of their country.

Happily for the future of this district, private enterprise and local organisations are rendering most important supplemental aid to legislative action. Several powerful Agricultural and Horticultural Societies, assisted by Poultry and Bee-keepers', Dairymen's and Fruit-growers' Associations, are doing great service in encouraging improvements in every section of farm produce. We now find scattered throughout this vast district many representatives of the best breeds of farm stock, and these are here brought to a very high perfection, whilst the fruit and dairy produce are proverbially excellent. The recent introduction of a study of the Principles of Agriculture into the schools of Ontario will soon exert an important influence upon the rising generation. When the educational policy thus introduced has attained its full development, it will contribute very powerfully to the general prosperity of the district, by securing an intelligent appreciation of any improvements introduced into farm practice at home or abroad. It must be admitted that at the present time Ontario takes the lead in Canada for general farm practice, but her example is being so actively followed; that she cannot safely rest satisfied with her present attainments. A healthy rivalry is rendering this East and South Eastern District more and more attractive to capitalists, and is causing a steadily increasing demand for male and female emigrant labour, which demand is even now very far in advance of any supply rendered by emigration. Whatever may be the inducement which other portions of Canada hold—and they are certainly great—this district has already attained a manufacturing and industrial power, and possesses such wealth producing capabilities, that her future prosperity is practically assured.

DISTRICT No. II.

MANITOBA, ASSINIBOIA, ALBERTA, AND THE NORTH-WEST TERRITORY, IN RELATION TO EMIGRATION.

The North American Indians, amongst their many peculiarities, have often shown much skill in giving accurate and descriptive names to the places they have frequented. Such appears to be the case with the name given to Manitoba, which really means "The Lands of the Great and Good Spirit," and there can be no doubt that the Indians have long regarded the lands as amongst the choicest and most valuable which had come under their observation. Consequent upon a series of most judicious treaties, the claims of the North American Indians have been equitably and satisfactorily met by a series of land grants, known as "The Indian Reserves," which lands have been secured for their sole use for the future, and within these Reserves they reside with great contentment. The result is that the vast territory grouped under this section is (with the exception of these Reserves) as free for settlement, cultivation, and use, as if there were no Indians in the country. This district is even more extensive than Russia in Europe, whilst a very large proportion of it is known to be of great fertility, admirably adapted to the growth of wheat, and yielding excellent pasturage. Rarely, if ever, has such a valuable tract of land burst so suddenly upon public notice. Much was known of the Eastern side of Manitoba, for railway communication to Winnipeg had brought the eastern section of this Province within easy access, but it was only as railway accommodation was provided on the western side of Winnipeg that this valuable district was rendered accessible for settlers.

It appears that early in 1871 it was agreed that British Columbia should be admitted into union with the Dominion of Canada, and one of the stipulations of that union was an undertaking that the Government would assist in the formation of a line of railway from the Pacific to the Atlantic ocean, thus effectually binding together this great confederation. The Canadian Pacific Railway has resulted from that agreement, but from a variety of causes the work of construction was not fairly commenced until March, 1881. At the end of August, in the present year, there was a straight run of 1,275 miles open for traffic, in addition to other railway workings, and of main line no less than 840 miles were to the west of Winnipeg. The opening of the line of railway to Calgary was celebrated during the time of my visit to Canada, and it is now confidently anticipated that the line from ocean to ocean will be completed in 1885. It will be readily understood that this rapid construction of railway communication, passing as it does through Manitoba, Assiniboia, as far as Calgary in Alberta, has opened up up this magnificent country to emigrants, from which at an earlier date they had been practically excluded by the want of an easy access. The scene on the prairie has become completely changed along the line of railway, for instead of the solitary bullock-waggon once now and then following on the Indian trail, and holding on its weary way, we have large and comfortable trains speeding along day and night, carrying travellers nearly a thousand miles through newly opened land.

A great movement such as this was certain to exercise an influence beyond itself, and I have to draw attention to two perfectly distinct results which were more or less closely associated with this great work. The first was that arising from excessive speculation, carried on by a group of individuals who sought to make fortunes without working for them. A railway of such vast proportions necessarily resulted in the location of cities and towns along the line it followed, and these were defined upon proper plans. No sooner had this been done than a number of speculators secured many of these town sites, and day after day sales were made at considerable advances, even when the land purchased could only be indicated upon paper. Under what was known as the Great Boom of 1881-2, the wildest speculations were ventured upon. Lands were frequently changing owners even on the same day, until after a time the bubble burst, and the shrewd speculators having managed to make considerable sums of money at the cost of the foolish and unwary, caused some difficulties in and around Winnipeg. Those who wished to throw discredit upon Manitoba, had now an abundance of real material at their command, and it was so skilfully used that many drew the inference that misery and ruin was closely connected with Manitoba, especially with Winnipeg, its capital. As a matter of fact, however, Winnipeg, rapidly arose out of this passing trouble, with a thoroughly healthy vigour of growth, and with business capabilities which are daily becoming more powerful.

But whilst this speculative work was going on, large numbers of quiet workers were following out another course of procedure, locating themselves upon some of the fertile lands which had been brought within easy reach by the new railway, and by their industry they have secured for themselves and for their children many a happy home and many a prosperous farm.

The general character of the district we now have under view presents a great contrast to the lands of the East and South-eastern district. In this district we have a prairie country, covered with its grassy turf and, generally, with little or no timber. It commonly presents an undulating or billowy surface, not unlike much of the downs of Wiltshire and Hampshire, and the Wold district of Yorkshire. Over much of the prairie it is easy to ride and drive, but the Indian trails are soon found to have been discreetly chosen, and to be preferable to any other course. On much of the prairie there is a very strong growth of grass, which is found to yield highly nutritive and valuable food, whether preserved as hay, or fed upon the land. Occasionally the prairie becomes varied by a growth of wood and small timber, both of which are exceedingly valuable and convenient for building purposes and fuel. The railway facilities, and the water transit arrangements, now enable timber and excellent coal to be distributed through the North-west, especially when the local supplies are feeble. The scenery is often relieved by lakes and ponds, the favorite resort of all kinds of water fowl, and the practical value of these water supplies is often great.

The fertility of prairie land varies considerably, but it generally carries some surface evidence whereby the quality can be approximately judged. A strong growth of wild roses, wild fruit, or the dog willow is generally considered a good indication. Amongst the wild fruits we found raspberries, strawberries, silver berries, currants, as well as the hop plant. In many parts the brilliancy of the flowers was very striking, and the perfume of the dwarf wild roses was charming. Here and there we find a remarkable change in the appearance of the prairie, and on examination there is evidence of an alkaline deposit on the land which is regarded by some as an objectionable feature. This is a matter which certainly needs a careful investigation, but at present I am unable to give any support to the discredit which is sometimes attached to these alkali lands, for I hope that any objectionable influences which may exist, may in the future be held under control. The water drawn from the immediate locality of these alkaline soils should certainly be avoided, and strangers to the district should be particularly careful in this respect. Much more has been made of this difficulty than is really necessary, for it appears to me extremely easy to avoid the lands which are thus marked with alkali, and these waters are most easily detected by their taste. Good waters and fertile land can be so generally obtained, that however desirable to know more as to the means whereby we may rectify these soils and waters, we may still regard this as a detail of land improvement which will be subsequently worked out as the necessity arises. We must not forget that the thousands upon thousands of square miles which have been so suddenly opened up for us, were only three or four years since the almost undisturbed haunt of the North American Indians, various kinds of game, and wild animals, and that we should not expect to find it all in good condition. It has been a source of much surprise to me that so very large a proportion of these lands should be of such a thoroughly useful character, and it is certainly undesirable to give undue prominence to small portions which may be supposed to possess objectionable conditions. Even if it be admitted (as has been stated) that the Canadian Pacific Railway does run through a district having in some parts a rather larger proportion of alkali land than is usual, it is also true that if you drive away from the railway, either on the north or on the south of the line, this alkali almost immediately disappears. When the route of this railway had to be decided upon, various considerations influenced the minds of the engineers engaged upon the work beside the quality of the land. The Imperial requirements and the economy of construction doubtless received due consideration, and I venture to entertain a confident hope that any difficulties arising from alkali land will soon be known only as a thing of the past. Rather let every well-wisher of Canada rejoice that the glorious result of opening up so many thousands of square miles of valuable prairie land has been so promptly accomplished at so small a cost to the Colony, and especially at a time when it will offer a home to many thousands who seek for the land which now lies ready for their use. Here, then, wheat lands are available which even the strongest opponent of Canada must admit are unsurpassed in the world, and as these become occupied by successful cultivators, they will not only produce an enormous amount of freight for the railway, but they will become large consumers of English manufactures, and they will give a power to Canada in which every patriot will rejoice.

It may now be convenient to form some general idea as to the ownership of lands in this district, more especially as these are largely invested in various public bodies. In the negotiations entered into for the construction of the Canadian Pacific Railroad, it was ultimately agreed that twenty-five million acres of land should be given to this railway company, in addition to five million pounds sterling. Aided by this very valuable subvention, the construction of the railway not only became a safe investment for the shareholders, but it has a future which is likely to prove unusually profitable. The Railway Company has the right to select their land, and thereby they secure through their own surveyors only such lands as are of approved quality. I believe that the Railway Company has already sold between five or six million acres of this land, so that the land remaining unsold represents an area about as large as Ireland—a truly magnificent domain. But whilst the Dominion Government conceded to this Railway Company terms which were perfectly consistent with this great work being brought to a successful issue, care was at the same time taken that the Colony should participate in that success, and that it should share in the increased

value which the railway was sure to give to these lands. For the purpose of giving effect to this provision, whenever land is marked off for sale or settlement, it is done in the following manner:—The lands are, first of all, laid out into "blocks" of twelve miles square by north, south, east, and west lines, marked at the corners by the Iron Bar Boundary. Each block is then sub-divided into four "townships," each side being six miles long, and therefore enclosing an area of thirty-six square miles of land. The townships are then divided into thirty-six sections, each measuring one square mile or 640 acres, and these sections are respectively numbered in a definite order from 1 to 36. The odd-numbered sections (with the exception of Nos. 11 and 29, which are reserved for educational purposes) belong to the Railway Company, and the even-numbered sections belong to the Dominion Government (with the exception of Nos. 8 and 26, which are the property of the Hudson's Bay Company). Thus the Government lands are located side by side with those belonging to the Railway Company. A settler may obtain from the Government a free grant of 160 acres of land on these even-numbered sections on certain conditions as to residence, cultivation work, and the payment of an office fee of two pounds for the cost of survey. He may also secure a second grant of 160 acres at a cost of ten shillings per acre. The Dominion Government and the Railway Company have both disposed of land to various large land companies, and these also are offering lands for sale at a small cost per acre, and in these cases the conditions as to residence, cultivation, extent of purchase, and mode of payment, become matters of special contract. These arrangements are, however, limited to the lands which are inside the Railway Belt; but outside this range, of twenty-four miles on each side of the railway, very modified conditions exist. The even-numbered sections are still open for free grants and pre-emption lots, but the odd-numbered sections will be sold by the Government as public lands, whereby they will be able ultimately to recoup themselves very largely, if not entirely, for the outlay made in the advancement of the railway works.

It is also worthy of notice that an admirable system of survey has been adopted by the Government, and under it, sections, townships, and ranges, are distinguished by a series of survey posts, any one of which determines the locality on which it is found. In our drives across the open prairie, often with little but the stars or a compass to guide us, it was, was, positively refreshing to come upon a survey post, and thus be able at once to determine our exact position. The system is most complete, and yet so simple that almost every workman on the prairie understands it; and, in a few words, any section of land can be described with perfect accuracy.

SUCCESSFUL CULTIVATION IN THE NORTH-WEST.

It would be difficult to imagine the growth of luxuriant crops under more simple conditions of tillage than those which are here practised. Dealing, as the operations of the field and garden here do, with a rich and generally deep virgin soil of remarkable fertility, there is less necessity for that refinement of good husbandry which is so important in exhausted, or even partially exhausted, soils. The rough culture which some of the lands here receive, especially from those who never held a plough before, seems to command the special sympathies of Nature, and luxuriant crops smile favourably upon the efforts even of inexperienced farmers. I do not mean to suggest that crops thus roughly sown equal those which follow good tillage, but I am bound to say that such crops are most encouraging to those who may have previously had little or no practical knowledge of farm work. The fact is the land is so very generally loaded with plant food, and to an extent absolutely unknown in Great Britain and Ireland, that this enables a strong seed to overcome minor difficulties arising from imperfect cultivation, and enables it to yield results which could not be hoped for when the soil contains only small supplies of plant food. Good cultivation is just as valuable here as elsewhere, but it is not equally necessary for securing a satisfactory crop and hence the rough culture of those who have yet to learn how to work skilfully, is remunerative and very encouraging to them. Year by year they will improve in their modes of working the land, and with that improved management, they will secure larger and better results.

In passing through the various settlements which are met with in this district, I was much surprised to notice the great variations which exist amongst those who

cultivate the land. The farms range from those of the humblest type to a perfection of which we should be proud if they were in Great Britain. Some farms are held by labouring men, who have commenced business without any more capital than was enough to pay the office fees for securing the land, and who have had their ploughing and sowing done for them by some neighbour to whom they have just given their own labour in exchange. I will mention just one typical case, out of hundreds which were met with.

"I came here," said my informant, "eighteen months ago with my brother, we had just two dollars (eight shillings) between us when we had paid the office fees for the 160 acres of land. We worked for wages for many a day (five or six shillings a day we got), and we also put up our log hut, so that before winter I was able to get my wife and family up from Ontario. We have now eighty acres cropped with wheat and we owe no man anything. Next year we shall have 150 acres of wheat, and all our own. We shall then take another lot of land, and make it right for my brother."

I met with other cases in which workmen employed upon farms bargained to be allowed to have four or five acres of land for themselves, and from these small holdings they were able after two or three years to secure, and enter upon, a farm of 160 acres for themselves. For a time they would, in such cases, continue to give up some portion of their time for wages. Providing that a labourer is steady and industrious, it is therefore possible for him thus to change his position into that of the owner of a small farm, but a small capital would have assisted him to an earlier success, and the same aid would have enabled many others to follow their example.

In the Elliott settlement, which is about thirty miles to the south of Brandon, in Manitoba, we have another typical group of highly successful farmers. These generally have 320 acres of land each; and although the settlement was only commenced three or four years since, yet, as they commenced with moderate capital, they have had nothing to impede their success. Substantial dwellings, school-houses, churches, well filled with merchandise, are to be found all over the settlement, and last winter over 100,000 bushels of wheat were sent from here to Brandon for sale. As we approach Brandon we enter upon a still larger class of farms about 640 acres in extent. Those belonging to the Honourable Mr. Sifton, Mr. Whitehead, Dr. Fleming, and Mr. Johnson may be taken as typical cases of farms which were speedily rendered complete by their owners, and forthwith brought under successful cultivation. In all these cases the profits on two years' cropping would repay the purchase of the property, and also the outlay for improvements. Other lands in the same district were farmed under a different arrangement, as for instance Mr. McBurnie's farms. He purchased 4,000 acres of land, it was enclosed, ploughed and backset ready for sowing, convenient residences and small farm buildings were erected, and these farms were then let to tenants at a moderate rental, which thoroughly well remunerated both the owner and the occupiers.

Amongst all the settlements I visited none gave me so much complete satisfaction as that which has been established by Lady Gordon-Cathcart, about ten miles to the south of Wappella on the western side of Manitoba. It is particularly worthy of notice as being a well conducted and successful colonization scheme. For various reasons Lady Gordon-Cathcart decided to render assistance to some of her tenantry who had become too crowded upon one portion of her property. A loan of £100 was kindly offered to each family desirous of emigrating to Manitoba, of which sum £25 might be expended in connection with their journey, and £75 was reserved for expenditure on the lands granted to them by the Canadian Government. The repayment of the loan was secured in regular course upon the land granted, and in accordance with the provisions of the Dominion Land Act. One of their body—John McDiarmid, an able and intelligent person for such a duty—was sent forward as a pioneer, and he, with the assistance of the Government Emigration officials, made a preliminary selection of lands. As soon as the party of emigrants arrived in Manitoba, ten or fifteen miles from the selected lands, the women and children were left in comfortable quarters near the railway, whilst the men marched off in a body to see what lands their comrade had selected for them. One after another the several homestead lots of 160 acres each were approved of by the different members of the group, and were duly scheduled in the names of the individual emigrants. They then returned to the nearest Government Land Office, and the regis-

tration of the land was completed, after which they secured tools for putting up some turf huts, which work being accomplished they had then to purchase their general farm supplies. Without delay working bullocks, waggons, ploughs, seeds and provisions &c., &c., were purchased, and paid for out of the money remitted for this purpose. It was on a bright and happy day late in May last, that they formed in procession, and marched to their farms with all they required for their tillage and proper management. They soon commenced ploughing the turf of the prairie, simply covering in their potatoes with the fresh-turned turf. They also sowed their wheats and oats upon the newly-turned sod. Very rough style of farming many will be disposed to say, still it must be remembered that they had no choice, but the results caused them no regret. Within eight weeks from the time of planting the potatoes they were digging their new crop, and before two weeks had passed I had some of those potatoes for dinner, and I do not hesitate to say that for size, flavour, and maturity, they were excellent. The roughly sown wheat and oats were then progressing rapidly, and a good harvest awaited their in-gathering. During the summer they had raised a better class of house, they had secured a supply of food and seed for another year, and their settlement was practically completed. A total area of about 3,200 acres had thus been secured, the quality of the land was good, the surface was gently undulating over the entire area, and it was as nicely wooded as many a park in the old country. The change in their position had been so quickly accomplished, that I can readily imagine that they must at times have wondered whether it was a dream or a reality. Was it really true that they were no longer small tenants and labourers struggling against pecuniary difficulties which well-nigh tempted them to rebel, and that they had so suddenly become the owners of happy homes and nice farms, without the shadow of a care or a fear as to their future support? It was true, and the deep gratitude manifested by those settlers towards Lady Gordon-Cathcart, no words of mine can adequately describe. It was obviously unnecessary to enquire whether they were happy in their new homes; but I did ask one of the party whether he had sent home to his friends a full account of the place, "Why, sir," he replied, "if I only told them half they would never believe me again." Closely associated with the success of this important work, I must mention the names of Mr. Peacock Edwards, of Edinburgh, and Mr. Ranald Macdonald, of Aberdeen, for they have most judiciously given effect to Lady Gordon Cathcart's good wishes. These facts show very clearly that a loan of a £100 prudently applied, is sufficient to enable a family to be brought from a condition of poverty to one of comfort and prosperity, and the money being secured upon the land, permits of a reasonable time being given for the re-payment of the loan and interest, and with perfect safety so far as regards the capitalist.

I have now to report upon a colonization scheme in which the work is being carried out by a company having the command of a large capital. The general scheme is to bring the land into cultivation, dividing it into 300 farms, each having a comfortable residence, with stabling and shedding enough for the stock. When this has been accomplished, these farms, with the stock and implements upon each, will be fairly valued, and the men who helped to carry out the improvements will each have the offer of his own farm at the valuation price, he paying for the same in five or ten annual instalments, as may be arranged. In the meantime each man receives wages at the rate of £84 a year, and he has his house and one acre of garden ground rent free. This scheme is being carried out upon the Bell farm, in the Qu'Appelle Valley, in the Province of Assiniboia, under the direction of Major Bell, the originator of the system, with Mr. T. Routledge as a Superintendent-in-Chief. The size of the farm is 64,000 acres, or 100 square miles. There is consequently a magnitude about the work which it is very difficult to realise, but as we learn what has been done, we become better prepared to accept the anticipations of the future.

In May of last year this tract of open prairie land was more than 200 miles from any railway station. The ploughs commenced breaking the turf on the 15th of June, and the buildings were started on the 13th of August. When I visited this farm at the commencement of September in this year, no less than 40 homesteads had been built, over 9,000 acres were under the plough, and of this quantity 3,400 acres had produced excellent crops of wheat, yielding an estimated produce of 90,000 bushels of very superior corn. A main line of railway was running through

the centre of the farm, and a town of considerable importance has been built near the railway station. If in May, 1882, any one had said that these results would be secured within sixteen months from that date, very few would have accepted his remarks as even probable. Proceeding then from what has been accomplished I may now draw attention to what has been arranged for, and for these details I have to thank Major Bell, but he has expressed a doubt whether they will be accepted, except by those who have visited the scene of operations, and informed themselves as to the capabilities of the farm:

August.	Acres under Corn.	Horses on the farm.	Estimate of Corn produced. Bushels.
1883	3,400	103	90,000
1884	9,000	200	180,000
1885	18,000	300	360,000
1886	25,000	350	500,000

These figures are undoubtedly astounding, but they are entitled to the highest respect. To watch 21 of Deering's Self-binding Reapers, each drawn by three horses, and working away at a 700 acre field of wheat is a sight which will not be soon forgotten by those who witnessed it this harvest, but it certainly prepares the mind for dealing with large results. Nor was it less surprising to learn how very simple the preparation of the land had been for producing such a crop. The 3,400 acres of turf had been simply ploughed over about three inches deep in the previous summer, and it had remained untouched until the spring, when the ground was seeded by twenty broad-cast sowing machines, each drawn by one horse, followed by forty-six sets of spring harrows, each drawn by two horses. The costs of cultivation were therefore excessively moderate. The quality of the wheat, however, is remarkably good, for it is ranked in the highest grade for the production of the much-prized Minneapolis flour. The soil of this farm is a rich, deep, black loam, resting on a clay sub-soil. It is not Major Bell's intention to grow wheat continuously, but he proposes to give the land a summer fallow every third year, and thus whilst the land will be kept clean, it will probably produce as much wheat as if it had been under corn year after year. Under this system he is able to increase the size of each farm from the usual quantity of 160 acres (one-fourth of a square mile) to 213 acres (one-third) as the tillage for corn is thus reduced.

Well may Canada be proud of having the largest farm in the world, but she may be much more gratified to know that this farm is also remarkable for producing an enormous yield of wheat, at the smallest known cost, and of the highest quality. At the same time, as a colonisation scheme, it will be largely profitable to her capitalists, and will settle 300 under conditions, which will secure their future success. The Qu'Appelle Valley has been generally recognized as one of the choicest portions of the fertile North-West, and in a few years we shall doubtless find that popular judgment very fully justified by the large number of luxuriant and profitable farms which are being established within its boundaries.

THE CLIMATE.

In no particular has there been a greater conflict of testimony than upon the character of the Canadian climate, and it must be admitted that the opponents of this colony have done their work very skilfully and very effectively. In the great majority of cases in which the agricultural capabilities of Canada are spoken of, a conclusive argument against the country appears to be embodied in the enquiry, "Yes, that may be very true, but how about the winters?" I cannot speak upon this point from personal knowledge, but I enquired of hundreds of residents of all grades, high and low, rich and poor, and their testimony leaves no room for doubt on my mind. In a territory so vast as Canada is, being nearly as large as the Continent of Europe, there must of necessity be many and great variations of climate, but the district which of all others has been reported to be the worst, and has been most discredited, is the Province of Manitoba, and for this reason its climate demands special notice. Residents generally describe it as far more enjoyable than the cli-

mate of England, and as only requiring specially prudent precautions when the winter wind happens to be rough and violent, a circumstance which is of rare occurrence. In the latest report issued by the Department of Agriculture for the Province of Manitoba, the climate is spoken of in the following terms, and I make the quotation because I regard it as thoroughly worthy of acceptance on the ground of its accuracy:—"On account of the bracing dry atmosphere, the fluctuations of temperature are not inconveniently felt, as is the case when the atmosphere is more humid. The warm days in summer are generally followed by cool evenings, and such a thing as very sultry and oppressive heat is scarcely known. The warm days, followed by cool nights and copious dews, facilitate the growth of cereals in a wonderful degree. The winters here are also very pleasant and bracing, proceeding from the same cause, namely, the dryness of our atmosphere."

It is a significant fact that, in the construction of the Canadian Pacific Railway through Manitoba, the work has not been delayed a single day by reason of the weather being too severe for the men to continue their work. Possibly, if Manitoba had not been such a very attractive district, its climate would never have been so thoroughly misrepresented.

CONCLUSION.

The foregoing facts and conditions have been brought under the consideration of the Council, in order that there may be some data before them justifying the general results of this enquiry. I find that the reports which have been so industriously circulated, and which describe in such extravagant language the destructive character of the Canadian climate, the bad quality of the water, the large quantity of alkali land, and the distress and lack of prosperity amongst the settlers, are either contrary to the facts of the case, or serious exaggerations of perfectly exceptional conditions. I find that these reports have been industriously circulated with the direct object of diverting the flow of emigration from Canada.

The interests of those amongst us who are being trained in a knowledge of agricultural science, but who have not sufficient capital at command to enter upon the practice of farming in Great Britain and Ireland, these have received my special care and consideration. I can with every confidence bid them not to be discouraged by such want of capital, which is now their great difficulty. Whatever may be done for them elsewhere, Canada is quite prepared to welcome them, and is ready to aid them to success. His Excellency the Marquis of Lorne, in thanking the good people of Ontario for their loyal address, presented to him at Toronto on his retirement from office as Governor General of Canada, made especial reference to this important subject, and commended it to the care of the authorities. The responsive cheers which greeted his remarks showed an enthusiastic acceptance of that recommendation. From information which I have more recently received I am able to add, that a widespread desire exists in the East and South-eastern District of Canada to give effect to His Excellency's recommendation, and I am now engaged in preparing a suitable organization. I am quite sure that in the North-West Provinces of Canada there will be an equal willingness to help. Pending the completion of these arrangements, I can confidently encourage all students of agricultural science to progress zealously with their work, and render their knowledge as complete in every day practice as possible, so that they may be placed amongst those selected for making use of any arrangements calculated to advance their future welfare and prosperity.

In the introduction of juvenile emigrants a great success has been accomplished, and the manner in which both boys and girls have settled into service, encourages a perseverance in the good work so well commenced. A house, and also a small farm, have been taken at Hamilton, Ontario, for the more advanced training of boys sent from Bisley Farm, near Woking, which belongs to the National Society in London for Homeless and Destitute Boys. The high credit which I know these boys have almost invariably gained in England for some years past, removes all doubt from my mind as to the general results which will thus be gained in Canada. Already they have done well, but as the work extends those results will become more apparent. The Rev. Mr. Seddon, the Educational Secretary to Cardinal Manning, returned from Canada with me, after an inspection of the homes of several hundred of the children

he had sent from London into the Province of Quebec. The result of that inspection was highly satisfactory, and proved how successfully these neglected boys of England can be introduced into new spheres of labour, in which they may become really valuable citizens of the State. The same may be said of the equally good results arising from the introduction of little girls. The transmission of adult female servants has not been equally satisfactory, but the combined efforts of the local authorities in providing additional homes for their reception, and those good services which are now being rendered by Miss Richardson in Quebec, promise to decrease the difficulty. It is a matter easily within command, and it should be rendered thoroughly complete without any delay.

I would here remark that it is not every one who is capable of making emigration a success. The idle, the intemperate, and those who lack perseverance, and consequently have never succeeded in life, these are no more likely to succeed in Canada than in Great Britain. The emigrants who are really wanted in Canada, and who can command success, comfort, and happy homes, are those steady and industrious people, who are able and willing to make themselves useful in some one or more of the general duties of life. Such duties will never degrade them, or be in any way inconsistent with their happiness and personal comfort. Those who have capital at command can make rapid progress, and with prudent care they can accumulate wealth, whilst the skilled workmen without capital may soon follow in the same direction. Much has been said at times as to the lack of prosperity amongst the artisans in Winnipeg, and of the large number who were out of employ, and we may take this as a typical case for other large towns in Canada. I find after very careful enquiry that this also is absolutely incorrect, and I learn upon the highest authority that the workmen are steadily accumulating wealth, and becoming owners of a large portion of that city. If, however, we examine the Government Savings' Bank returns from the Winnipeg branch, we find the deposits made by this class of persons steadily increasing year by year.

Deposits in Winnipeg Branch Savings Bank.

June 30th, 1880 .....	.....	.....	.....	.....	£23,660
" 1881 .....	.....	.....	.....	.....	38,502
" 1882 .....	.....	.....	.....	.....	111,726
" 1883 .....	.....	.....	.....	.....	117,260

We have in Great Britain a large number of good workmen, who with all their desire for employment, with every effort they can make, pass through life verging upon absolute poverty, with no hope for their advancing years, but a sad dread of an increase of trouble, with the Union as their final house of rest. If they have the encumbrance of a large family, so much the worse for themselves and their children. It would be the most bitter irony to remind them that it has been said, that "Blessed is he who hath his quiver full of them." But it is desirable to notice the remarkable change which takes place immediately the parents determine to emigrate. At once they find emigration agents their active and ready helpers, and the man who may have thought himself and his family an encumbrance, suddenly learns that as an emigrant other people know that he and they have a value, and hence each agent seeks to secure them for the colony he may happen to represent. At every step the intending emigrant now takes, he sees that he is valued, and one official after another is ready to help him forward, not as an act of charity, but because he and his family are well worth helping to a new home in one of our colonies, where there is room to live under conditions of health, happiness, and prosperity. Under such new conditions of colonial life I have seen parental love re-assert itself, and the children of the family are really looked upon as blessings, and in a manner quite unknown amongst those who are compelled to live in the crowded parts of some of our large towns. If the colonization scheme so successfully introduced by Lady Gordon-Cathcart could be extensively carried out by means of public loan, untold blessings would result both to the old country, and also to Canada. One essential element for success appears to be very generally recognized in Canada, and that is securing such a

judicious blending of the selected emigrants, as would prevent all chance of their becoming a disturbing political force in the colony.

I also find that the mode of executing work differs greatly with the modified class of persons by whom that work has to be done. We may take a case very commonly met with, in which gentlemen with small capital, and unaccustomed to rough work, find it necessary to secure a good income by their own industry, and farming commends itself as the most agreeable and satisfactory means for doing it. At first the fear arises that too much of the profits will be lost if all the work is done by hired labour, which is certainly expensive. "I shall have to lend a hand myself," is the natural comment, "but I shall not like to follow the plough, or cut my own corn, and besides this I have had no practice in doing the work." With the usual smartness of your friends in the United States, this difficulty has received a practical solution, for almost all their farm implements are constructed so that they may be driven from a raised seat. It has thus become almost as easy to work any of the principal farm implements, as it is to drive a spring waggon or a carriage on a turnpike road. These improved implements are being largely introduced into Canada, and I can assure those who have not seen them at work that this especial difficulty has been successfully overcome. The teams also have to adapt themselves to circumstances, for many a team has been driven in a Sulky Gang Plough in the morning, and been hitched into a light spring waggon in the afternoon for driving some visitor over the country, or for taking members of the family to pay a friendly call upon some neighbour. The horses they drive are unlike our slow-paced and heavy farm teams, but are as light and active as our carriage horses, and as a rule they are well bred. Thus the necessities of colonial life have demanded a modification in their farm horses, their agricultural implements, and their domestic appliances, for meeting the difficulties arising from any want of practical skill on the part of the emigrant, or for enabling that work to be more easily performed. The result is, that to take part in the work of the farm, or the duties of home, ceases to be objectionable, even to those who have been accustomed to have this work done entirely by deputies. I met with many instances of persons who had lost income and property in the old country, and who had settled down in Canada with the small capital which had been saved, and therewith had become happy, prosperous, money-making farmers, with no care and anxiety about providing for their children, bright and cheerful as the day was long, and in the full enjoyment of health and great domestic comfort.

To capital, skill, and industry, Canada offers many and great inducements, and as a natural consequence, these are steadily flowing into that country, spreading prosperity and contentment along their course. At the same time it is specially worthy of record that there is an entire absence of that lawlessness which is far too common in other districts. The rights of property are most clearly recognized, and firmly maintained, and it may be confidently stated that there are no subjects of Her Majesty more thoroughly true and loyal to the Crown than the people of Canada.

It now remains for me to acknowledge the very valuable assistance which I received in Canada, from all with whom I came in contact. The active assistance so kindly rendered by His Excellency the Marquis of Lorne, greatly contributed to any success which I may have secured. The same kind willingness to help extended through all the classes, and whenever information was sought it was cheerfully rendered, and I now desire to acknowledge it with my warmest thanks. My thanks were also due to my friend and companion in travel, Mr. Hugh Pollock, to whom I am greatly indebted for much valuable help in the performance of the several duties devolving upon me.

I have the honour to remain,

My Lords and Gentlemen,

Your obedient Servant.

HENRY TANNER.

LECTURES

—BY—

MR. R. H. ANDERSON.

—O—

MR. R. H. ANDERSON, of the Bank of Ireland, Portadown, was one of the Tenant Farmer's Delegates who recently visited Canada, and who gave an able and independent report on its resources. He did, during last winter, at the request of friends, deliver several lectures in the North of Ireland, which were reported in newspapers, and from which the following statements are taken :

REASONS FOR EMIGRATION.

I shall now give you my reasons for emigration, and I approach the subject under considerable difficulties. I am sure many of you have seen in the daily papers within the past few weeks the letters written by Professor Baldwin on emigration. Professor Baldwin, I need hardly say, is as good an authority on agriculture as any in the kingdom. Well, what does he tell us? I shall in a few words sum up what he says. "Any person," says the Professor, "advising, aiding, or abetting emigration is guilty of a crime. So far from its being the case that Ireland is overcrowded, she is but half populated. For any local congestion that exists the cure is migration, not emigration. There are tens of thousands of acres of waste and semi-waste land in Ireland: let this land be apportioned among the laborers and small farmers, and Ireland will at once blossom like a second garden of Eden." Professor Baldwin is more sanguine than most of the farmers in the North here. Let me ask what is the nature of these waste lands on which Professor Baldwin wants to settle the people? What will they grow? Why has he to complain that they are going out of cultivation? Mr. Baldwin tells us plainly what too many farmers know to their cost, these poor waste lands won't, he says, do for grass. They require eternal breaking up, or else back they go to the prairie state. But Professor Baldwin does not want grass, he wants tillage. Well, now, I want to know who among us is sanguine enough or mad enough to trust to a wretched soil, backed by a wretched climate, backed by wretched prices, to bring comfort to his soul as a tillage farmer? The Northern farmers are as industrious as any I know, and I shall just ask them what can they do with their small holdings of land, which as yet are neither waste nor semi-waste? Could they live on them at all without the aid of the loom? What pays them? Does their wheat? Does their oats? Does their flax? When will they get their seed in this year? When did they get their crops out last year? No doubt, they have a good potato crop now and then, but even could they rely on this crop I trust the time has gone for ever when the farmer will be content to keep body and soul together by bonds formed of potatoes and buttermilk alone. No, my friends, you will allow a snipe could not justly be accused of grumbling if he insisted he was overcrowded, though alone in the centre of 1,000 acres of sandy desert; and so, I say, the farmer, though he own 1,000 acres, may justly complain of overcrowding if the 1,000 acres are of barren soil. To preach emigration may be a sin; I don't believe it to be one, and therefore I advise it. Why should we emigrate? Why should we leave home?

'Mid pleasures and palaces tho' we may roam,
Be it ever so humble there's no place like home.

You all know the words, my friends, and I am sure there is not one in this room whose heart does not echo the sentiment: if there is I pity that person. This love

of home is one of the strongest instincts of our nature, love of some particular spot of earth, rugged, bleak, and uninviting to others, perhaps, but softened and made beautiful in our eyes by early associations. It is well that it should be so; this feeling gives strength and solidity to all human institutions, and is the mainspring of civilization itself. It is curious to note how it affects different races. In the Frenchman it partakes more of the nature of pride than of aught else. To him Paris is the heart of the world, let but that cease to beat, and the world must die, or ought to die, he thinks. In the Chinese, it is closely allied to superstition; their great wish is that they may die, or rather be buried in their native land, more than that they may live there. In the Irishman, the love of home might be called a sentimental passion. In his eyes a mud-cabin, with poverty and wretchedness, in the Green Isle, is more desirable than the fairest palace anywhere else on the earth. But as with life is the germ of death, so in the Irishman's very love of home is its maker and its destroyer; for what Irishman ever yet considered his home complete, or indeed a home at all till a Mary, or an Ann, or a Rose, heaven bless her, had taken her place by his fireside. On the consequences of this arrangement I need not dilate, my friends, you all know them, the prolificness of the race is proverbial all the world over. I shall merely state the fact—there are at present some 18 or 20 millions of Irishmen alive, and I fear that if these alone, to say nothing of the myriads that a few years will add to the number, were crowded on her bosom, poor old Ireland would be sunk beneath the waves. It comes to this, therefore, our love of home, or at all events the way we take of making one, force many of us to leave home. Heaven knows I have no desire to weaken your love of home. I only ask you to look bravely at the circumstances of the times and allow no sentiment, however beautiful it may be in itself, to stand between you and prosperity. Some must go—this, indeed, is my first reason for emigration. Some must go! Many of you will perhaps say that before 1846 Ireland contained eight million inhabitants, instead of the five she contains now. I admit it, and will simply ask would any of you like a return of that state of things; besides, population, like everything else, must be weighed in connexion with other circumstances, to judge correctly of its proper proportion. What is a state of congestion now need not necessarily have been one twenty or thirty years ago, for Ireland had not then to bear the tremendous strain of foreign competition in agricultural and other products that so sorely presses her to-day. This brings me to my second reason for emigration, *i.e.*, foreign, principally American and Canadian, competition. It may be said, and I have heard it said, that America has for some seasons past had propitious weather, while we have had the reverse, and that when good seasons return things will right themselves. This is not so. Weather, no doubt, is an important factor in the calculation as to how far America and Canada will affect us, but it is not by many the most important. Millions of square miles of virgin soil in America and Canada will have to be taken into account as against a few millions of acres of worn out soil in Ireland; the most perfect and cheapest labour saving machines there as against second rate expensive ones here; nominal taxation there as against heavy burdens here; cheap freightage there as against exorbitant rates here; and protection there as against free trade here. The full consideration of this last point would require too much time to admit of my handling it to-night, even suppose it did not trench too much upon politics. I shall just state a few facts for you to take away and digest. The great cry of the free trade is, "Be proud all ye inhabitants of the United Kingdom that your imports exceed your exports by many millions worth. The difference shows the enormous extent to which foreign nations are indebted to you. For this excess is the means by which they pay you interest on borrowed money." In abstract this is right, and while our imports consisted of raw material to be manufactured by our artisans the larger the imports were the better; but when, as in 1879, and since, an enormous percentage of our imports are manufactured goods the case is different—dismally different—for this simply means our workers idle, our mills stopped, our furnaces blown out, in fact poverty and discontent on all sides. Now, while this is the state of things at home, what about our goods in foreign markets? They enter most of them handicapped by a 40 per cent. duty. To quote a case that will be fresh in your memories, the potatoes we sent last year to America had to pay 24s per ton duty. In 1865 our national debt was 812 millions, and that of America 551 millions. In 1883 we owed

756 millions, and the States 302 millions. Thus free trade reduced our debt by 56 millions, while protection reduced the debt of the States by 259 millions. This reduction means an equivalent reduction in the taxation of the people. Indeed, the total taxation of the States is about 72 millions per year, with a population of 52 millions; while we are to have the pleasure of paying this year somewhere about 90 millions, with a population of 35 millions. Now, let us see how our account for goods stands with the United States. In 1880 they sent us good value for 107 millions, and took from us only 38 millions worth. Just a few more figures and I shall have done with this part of my address. These figures, taken from the Board of Trade returns, are full of ominous import, and worthy of particular attention and thought. In 1862 the population of the Kingdom was 29½ millions; the total food imports 50. In 1872, population 32 millions; food imports, 74½ millions. In 1882, population 35 millions; food imports, 108 millions: i.e., in 20 years our population has increased by 5½ millions, and our food imports by 59 millions; in other words, in 1862 there was paid for each man, woman, and child, £1 14s 5d for foreign food, and in 1882, £3 1s 7d. I have not the exact total of 1883 by me, but here are some of the particulars. For meat, alive and dead, we paid about 22 millions; for butter and cheese, 16½ millions; for potatoes and breadstuffs, including grain of all kind, 63 millions; eggs, 3 millions. These figures require no comment. You see the farmer, as well as the manufacturer, is handicapped everywhere. Even the trade of the North is in danger; for let me tell you, Canada and the States are growing increased quantities of flax every year and not for seed only, but for the manufacture of linen. No doubt the climate of a great part of America is unsuited for linen weaving; but you must remember that America has all the climates of the world. Now, my friends, if I had time to compare one year with another, I could make it plain that this competition is enormously on the increase, and is likely to go on increasing. Everything is in favour of its doing so. And you know that England will not return to protection or even fair trade; nor is it probable that while she finds protection as profitable as she does, the United States will be converted to free trade, though many believe she will be. Supposing she is, undoubtedly we shall reap great benefit, but not I think, to the extent one might suppose who did not remember that so sure as protection is done away with in America, wages there will fall and she will produce more goods for her own use than she does at present. Well, in the face of this state of things, what about our farmers holding 5, 10, 15 and 20 acres there at home? What about them, I say, even supposing they had their land, or nothing? Can they "live and thrive" on it? Well you know they cannot: nor can they depend upon the aid of the loom so well now as in times gone by. Will the Land Act do these men good, think you? Without hesitation I say it will not do them good but harm, as by reducing their rent it will encourage them to remain in this country instead of going abroad where there is room for them, where they are wanted, and, where their labour would be recompensed. My last reason for emigration is merely a natural deduction from what I have said. Why live in misery at home when you can be happy and independent abroad? Mark you! I don't say to all emigrate. Let any who are doing well at home stay and prosper; but let the thousands who are not doing well, and who know they can't do well at home, go out; by doing so they will benefit themselves, they will those they leave behind, they will benefit the world. Some one has said that "any man who can make two blades of grass grow where only one grew before, is to be considered a benefactor to his race." If this is true, what is to be said of the men who make bushels of wheat and tons of beef grow where none grew before? But you must remember that it is not to Ireland as a nation I am speaking, nor to you as patriots, but to each one of you individually, as men seeking to know how best to benefit themselves and their families. I do not believe in wholesale emigration as a panacea for Ireland's woes. Emigrants, individually, would be acting wisely, and would be sure of increased prosperity, if they would but go out and take to farming; remaining in the large cities means the moral if not the physical ruin of our countrymen who go to the States and Canada; and unfortunately, too many of them do this, working, and working hard, for others while they might be working for themselves.

COUNTRIES TO WHICH TO EMIGRATE.

The necessity of emigration once conceded, we shall briefly consider my second

point. The countries to which we may emigrate, the countries in which most emigrants from the United Kingdom settle are—the English Colonies in South Africa, New Zealand, the United States, and Canada. Of these the first three has each some disadvantage peculiar to itself. Africa has lost much in public favor as a field for settlement, owing to the frequent and terrible troubles with the natives and the Boers, to say nothing of the low estimation in which the British flag is held there just now. Last summer I met a friend of mine who went out a few years ago and settled in Griqualand. He described the climate as delightful, and was looking forward to a prosperous future when the Basuto troubles began. One morning, after an absence of two days, he returned to his farm to find his house burned down and what was worse, the mutilated bodies of his friend and two servants lying dead beside the ruins, his cattle and all he had was gone. He became a volunteer, and fought against the Basutos, as he told me himself, for the sake of a little revenge, and afterwards returned to Ireland a poorer man by £1,500 than went out. So much for Africa. Against New Zealand there is little to be said; however there is something. The land there is much dearer than in Canada, and is not nearly so good, and then it has not Great Britain as a market for her goods. I would also remind mothers of young families that the Maories were cannibals, and they still show that the old nature is not quite dead in them. No doubt there is much to be said in favour of Australia, but she, too, has her disadvantages. For instance, droughts that often leave the farmer without either crops or flocks, and some of the deadliest snakes in the world are common in Australia. Manitoba and the North-West are free from venomous reptiles and they seldom suffer from drought. There are snakes in the North-West, but they are harmless. I had the pleasure of sleeping with two or three of them one night. They got under my rug. I doubt if the proverbial flash of greased lightning ever moved quicker than I did when I became aware of my strange bedfellows, and you may imagine how foolish I felt when on waking up my companion with a cry of snakes, to save him, as I thought, from certain and instant death, he replied in a surly, half-sleepy tone, without so much as moving, "confound it, man, why did you waken me? you may go to bed again, they'll do you no harm." It must be confessed that the disadvantages I have mentioned are as nothing when compared with the many advantages the colonies referred to undoubtedly possess. But, then, all three suffer in common from one tremendous drawback—the length and expense of the journey. The cost of bringing a family to any one of them would enable a man to make a good start in the North-West. Go to Australia or New Zealand and you are practically lost to your friends at home.

REASONS FOR SELECTING CANADA.

The run from Canada is a short and inexpensive pleasure trip.—£9 or so and 12 days will take you right up into the North-West from where we now are—Canada is a land of sunshine—sunshine the whole year round, and never more brilliant than in the depth of winter. Canada is a land of peace, plenty and contentment; a land of liberty, civil and religious; a country, too, of vast dimensions. It may surprise some of you to hear she is larger than the United States. She contains 3,620,000 square miles. Lastly, she is a rising country. Not so many years ago her population was estimated at one and a-half millions, now it is four and a-half. A few years ago it was thought she had done well when her exports reached six millions. Last year she sent out goods, principally cattle and grain, value for about twenty-three millions. She is bound to be the country of the future; her climate is more suited for us, and for the agricultural pursuits we follow, than even the States. Canada can support eighty millions. What calling do you wish to follow that you can't follow with profit in Canada. Do you wish to raise wheat? No wheat in the world is better than that grown in Manitoba, and there is nothing to limit the quantity, but the ability to cultivate the soil. Do you wish to raise cattle? The largest herds of pure bred cattle in the world are in Quebec and Ontario, and there is land enough to rear cattle to supply all Europe. Do you wish to become a wine producer? Go to the valley of the Ottawa, it can be turned into one vast vineyard. Do you wish for fruit culture? Why, half Ontario is an orchard. Will you turn your attention to manufactures? The country is new and needs you, and will repay you for your outlay of capital. You will require no steam for your work, at least in summer. The water-power of Canada could cut and grind for four or five such worlds as ours. Do you

covet mineral wealth? The mines of Canada, gold, silver, iron, coal, are as large as any in the world. They are as yet almost untouched—still they have already yielded enormous fortunes to many a speculator.—Ontario is at present the most important province of the Dominion. Before long others more important, from an agricultural point of view, will be formed out of the great North-West. Ontario is the great English speaking province of Canada. Altogether the surroundings are so much like those at home, that one is apt to forget when travelling there that he is in a foreign land. The soil is very rich, and gives wonderful yields of all kinds of crops. There is plenty of excellent land to be had, both cleared and uncleared; improved farms can be bought for from £5 to £15 per acre, with improvements *i. e.*, dwelling-house, out-offices, fences, &c., while free grants of 200 acres of uncleared land are offered by the Government; but I would not recommend anyone to take a free grant in Ontario while he can get land in the North-West. The climate is a good one, cold in winter and hot in summer, but healthy. This is ample evidence by the looks of the people and the condition of the cattle. The farmers are a happy, contented set of men. Many of them went out thirty or forty years ago without a penny, and, though they have had to clear their land of timber, not a few of them have been able to save money, as well as owning their farms. Their homesteads are very comfortable, and, as a rule, are 100 degrees more so and more elegant than farmers' homes in Ireland, even in the North here. Now, numbers of such homes are ready to receive English and Irish farmers who have money enough to purchase them, and who would prefer a life so much like their old home life to a rougher one, rougher for a time only in the North-West. Manitoba and the North-West will not require many words. Till 1870 they were the private property of the Hudson's Bay Company. In that year the Government purchased the company's interest in them, and opened the country for settlement in 1872, at which date it could boast of but a couple of thousand white inhabitants. Now, if I mistake not, the population is a long way over 160,000. The soil is inconceivably rich. I will let the greediest farmer in the county give a loose run to his imagination as to the soil he would like, and yet venture to say he will not do it justice. The wheat grown there is, as I said before, excellent, hard, plump, thin-skinned, and full of flour, and it yields more bushels to the acre than any of the land in the States. Cattle do well and grow quite fat on the natural grasses. All crops we are acquainted with in these countries do to perfection there. There is no clearing of timber to be done. A man may run a plough for sixty miles in a straight line without stick or stone interfering. The climate is very healthy, very hot and very cold, but neither heat nor cold is found to be unpleasant. I can speak of the heat from experience, but not of the cold. However, every one I spoke to on the subject assured me that owing to the intense dryness and stillness of the atmosphere, and the brilliant sunshine, it was not only bearable but pleasant. Persons in consumption are sent to the North-West to be cured. The greater part of the North-West is rich, dry, rolling prairie, in appearance not unlike the country round Armagh. Wages are higher than even in Ontario, and then a labourer can take up his free grant and start for himself when he has saved a little money; and as for women there are two classes of situation open to them, they can either become domestic servants at high wages, or farmers' wives, and work for love. I won't give advice as to which I think the better post, but I know that there, as here, mistress has but a poor chance when pitted against a lover. The whole country is now, by means of the Canadian Pacific Railway, which is in working order for some 800 miles west of Winnipeg, brought within marketable distance of Liverpool. I have it on good authority that wheat from the region of the Saskatchewan will be placed in the Liverpool market for 30s, or less per quarter with profit. Now, in this grand country a man can have a farm of 160 acres for the trouble of settling on it. Why will Irish farmers starve? The lecturer then referred to the wonderful progress of Manitoba.

THE VOYAGE AND TRAVELLING IN CANADA.

In another lecture Mr. Anderson said:—In the summer of 1880 I started for Canada at the request of a number of personal friends, a great many of whom have since gone out and settled there, to prospect for them, as they say in the North-West—*i. e.*, to view this wondrous Canaan which, if it does not flow with milk and honey, certainly abounds in an unlimited extent of virgin soil, which, to quote Mr.

Gladstone, "requires only to be tickled to smile forth a rich and abundant harvest." I wonder how long we'd be tickling poor old Ireland before she would smile forth anything—tears, I am sorry to say, seems more in her line than smiles. The Canadian Government asked me to write a report on the country for them. Having first examined me closely as to my knowledge of agriculture—I say this merely that you may have confidence in what I tell you regarding the capabilities of the country—they gave me *carte blanche* to go where and see what I liked. I took advantage of the offer to the fullest extent the limited time at my disposal would admit of. I saw all I could, and certainly worked hard enough. From the day I reached Canada till I left it, I slept but four nights in bed—most of the time a waterproof rug on the prairie with a tent overhead constituted my sleeping apartment and furniture. I might indeed add to this extensive list a tent peg, with a small bit of candle tied to its end, stuck in the ground to serve in case light was required.

After a most delightful voyage of $7\frac{1}{4}$ days, during which we were but $4\frac{1}{2}$ days out of sight of land, we had 700 miles river sailing up the St. Lawrence. I landed under the guns of that grand old fortress, Quebec, which is rightly called the Gibraltar of America. You will naturally ask was I sea sick during the voyage. Yes my friends, I was dreadfully so. Oh! the horror of those few hours. There were moments when I would have given all I possessed to be at the bottom of the sea; ay! even in the whale's belly with the prophet Jonah. However, morning brought a bright sun and relief, and I continued well and happy afterwards. The ships of the Canadian Lines, are magnificent vessels; the accommodation and food for all classes are of the very best quality and description. Without being in the least a gourmand, I often wish for the appetite that an Atlantic breeze induces, and a steamship dinner to satisfy it with. I was allowed the privilege of inspecting the food and accommodation for the intermediate and steerage passengers on board. Cleanliness, order, and comfort prevailed everywhere. As regards the saloon passengers, so pleasant is their lot that one is not surprised at the expressions of regret to be heard on all sides when the voyage comes to an end. As I told you before, I have not time to describe much of what I saw in Canada. There are, however, a few things I cannot pass by. The run down the river St. Lawrence from Kingston to Montreal through the 1,000 islands and the rapids is worth going to Canada for. The journey occupies about ten hours—ten hours spent amid scenery surpassing description, and part of it (while shooting the rapids) under excitement enough to make the tears start from the eyes of strong, sunburnt men. I dare not attempt a description—the wonder and beauty of the scene has left me utterly confused as to details. For some forty miles the river is studded with lovely islands. The so-called 1,000 Islands are in reality twice that number, many of them clothed with verdure to the water's edge and crowned with beautiful trees. In places they seem to bar the way, and the vessel is carried on through a perfect labyrinth of beauty. The first four rapids do not merit particular notice. The fifth, the Long Sault, is, I believe, 11 miles in length. On entering this rapid, steam is shut off and the vessel is carried along at a furious rate by the current. Six men at the helm keep her steady at her course. 25 or 30 miles further on we come to the Cedar and Cascade rapids. Here again steam is shut off, and for a little the vessel glides gently on, till with a fearful dive that shakes many a stout heart, she rushes right down through the angry waters that seethe and boil all round. Sometimes the speed is terrific, and the danger seems great. Huge rocks are plainly seen a foot or two under the water threatening instant destruction. The next and last are the Lachine rapids, the most dangerous of all, I believe. Every moment one expects the vessel to strike some one of the innumerable rocks that jut up on every side; but the pilot—usually an Indian—knows his work, and twists and turns her in every direction to avoid the danger. Once safely through, a run of a few miles brings us to Montreal. It is possible that among my hearers to-night there are intending emigrants who might consider the excitement of a run down the rapids—neither an enjoyable nor desirable variety in their journey to Manitoba. If so, I may say to them, this trip which I took for pleasure on my way from Manitoba, does not concern them. They can go the whole way from Quebec to Winnipeg by rail. Of course I visited Niagara. I crossed Lake Ontario from Toronto to the Falls. So much has been said and written about the Falls of Niagara I shall not attempt a description. I felt disappointed with the whole place at first; but one feels the sublimity of it

more and more, and at last I had to confess that it is beyond human powers of description. In olden times the Indians came here to worship the Great Spirit, and offering as a sacrifice to him a young girl, whom they placed in a canoe full of flowers, which was let float down over the Fall, carrying her to her death in the waters below. I passed under, or rather behind the Fall both at the Canadian and American side. The sensation is never to be forgotten. The breath is held as one gazes at the mighty veil of waters shrouding him from the outer world, and we stand in safety within a step of destruction. The ledge of rock on which you walk behind the Fall is only a few feet wide. Two or three miles below the Fall a whirlpool is formed by a peculiar indentation up the bank. When I tell you that 100,000,000 tons of water are supposed to pass over the Fall every hour, you will have an idea of the vortex. The volume of water is estimated at 20 feet thickness. It was, as you know, while endeavouring to swim through this whirlpool that poor Captain Webb lost his life. Anyone who has seen the place can form some idea of the nerve required to attempt such a feat—to an ordinary mortal it seems simple madness.

AN IMMIGRANT'S LETTER.

DEAR SIR:

BRANDON HILLS, Dec. 27, 1883.

IN compliance with your request I hereby furnish you with a few of my experiences in the North-West. Having left our native province of Nova Scotia, we arrived in Winnipeg in April, 1879. My family, consisting of a wife and seven children, all of whom travelled with me, and shared my difficulties. At that date no railway existed west of Winnipeg, so that our journey had to be made with teams and waggons. Like Abraham of old, we set out, not knowing whither we went, and after travelling about 150 miles, and spending nearly three weeks on the journey we obtained a view of what we afterward learned were the Blue Hills of Brandon. But, alas, the swollen Assiniboine flowed between us and those well wooded hills. However, being old salts from the Atlantic Coast, we were not easily daunted, so we converted our wagon boxes into boats, drove our teams into the rapid current, and ferried over in safety. We have therefore, the honor of being the first white settlers that ever crossed the Assiniboine at Brandon. The first season was one of great loneliness, but we had strong faith in the country, and were delighted with our situation, and bound to grapple with difficulties. We immediately put our shoulders to the wheel, and although my sons were young and inexperienced at farming, we broke up a number of acres of prairie and erected a comfortable log shanty and stables, and made preparation for a North-West winter. As our supplies had to be brought from Portage Le Prairie, a distance of about 90 miles, we were necessarily often on the trail, and much exposed to heat and cold, yet we never enjoyed better health in our lives. During the first season we did not attempt to raise any crop, but confined our attention to preparing the land for the following year. During the second year we raised 600 bush., and freighted our first grist 90 miles to a mill. No flour was ever more highly prized. During the third year we raised 1,700 bushels and found ourselves surrounded with a large number of industrious settlers, and a railway scheme in the hands of a strong syndicate, with the prospect of being within a reasonable distance of the line. During the fourth season we raised 4,750 bush., and found the country booming on all hands, and the city of Brandon rising on the banks of the Assiniboine, not far from the point at which we had crossed, and a railway within seven miles of our door.

During the past season we raised 6,200 bush. of grain, besides potatoes and other vegetables. The season was a remarkably dry one, and the grain ripened very unevenly, and in consequence a considerable quantity was injured by frost, especially what was late sown. Farmers will no doubt learn an important lesson, and sow as early as possible in future. The average yield during the past five years, as far as I can ascertain, has been: of wheat, 25 bush. to the acre, and oats, 50 bush. We have never had a bad crop since we came to the country.

Yours respectfully,
GEORGE RODDICK.

Notes of the Rev. Mr. Bridger's Observations.

The Rev. Mr. Bridger, of Liverpool, brought out a party in May 1884. In returning from the Fertile Mountain District, in Manitoba, he was "interviewed" by a newspaper reporter, from whom we learn:—Concerning his trip out this time Mr. Bridger states that the party left England on the 24th of April. The ship made an excellent run, but was detained two days on account of the fog on the Irish coast. The party made the initial trip in one of the new Canadian Pacific Railway steamers—the Algoma. The boat, Mr. Bridger says, is an elegant one, better adapted for first class travel than for steerage passengers. He, however, states that better arrangements will be made in the future for the comfort of the immigrants, the majority of whom had to sleep on the floor during the recent trip. He could not speak too highly in praise of the immigrant sleepers. The Canadian Pacific Railway deserved great praise for inaugurating them. The immigrants were delighted with them.

Mr. Bridger visited several of his old people who had settled down in the Fertile Mountain District. He held Divine service on Sunday, to which many came. They all expressed themselves highly pleased with the country and marvellous fertility of the soil, but were looking most anxiously for the railway, as it was almost impossible at present to sell their produce. Attention is being turned to poultry &c., which so far, has found a ready market at Brandon at good prices. Mr. Bridger was surprised to find the country so well settled and when the rail reaches this port it will without doubt, be one of the finest districts in the whole country. Mr. Bridger expressed his delight at meeting so many old friends out here whom he brought out in former years. It gave him unmixed pleasure to have them crowd around him to have a shake of his hand for the sake of old times and all expressing themselves well pleased with the country and its prospects.

Mr. Bridger was very much delighted with the assistance he received from Capt. Grahame, the Dominion Immigration Agent. The captain was unremitting in his efforts to assist the immigrants to procure all the information possible, and he gave himself no end of trouble to procure work for all he could. For these kindnesses Mr. Bridger desires to state that he is extremely grateful to Capt. Grahame.

Being asked if the opening of the Hudson's Bay route would have a salutary effect on emigration, Mr. Bridger's eyes sparkled, and he said:

"Now, my man, you've struck a key-note. I tell you that the opening of that route would be the grandest thing that could be done. It would assure a constant flood of immigration into this great North-West until it was filled so full it could hold no more."

Mr. Bridger went to Brandon to-day, but will return shortly, when he will go back to England. He does not expect to return to Canada again this year, although he will do all in his power to advance the interests of emigration to this country.

Dr. Miggott was one of those who accompanied Mr. Bridger. He has a number of sons doing well in Manitoba, and he proposes to settle here himself to practice his profession. He will, however, return to England first. Speaking of the doctor Mr. Bridger said he had been of great service professionally on the road out. He was the only physician in the party, and as a great many were sick he attended to them all. The doctor, who came from Scarborough, Yorkshire, says there will be considerable emigration from that district this year. Men who have families growing up do not care to stay there, as they can see no future for their families, and would sooner sacrifice their own comfort than see the future of their sons crippled.

Mr. Bridger received the following letter from an English widow lady settled with her sons in Manitoba. It is given as showing how an educated English lady can settle down and be contented with prairie life, and also as showing her appreciation of the country and climate, without, however, publishing the name of the writer:—

EMANUEL'S HOPE, GREENFELL.

ASSINIBOIA, CANADA, May 10th.

DEAR MR. BRIDGER,—Lately I received a letter from my dear friend Miss Brown,

telling me that she was sending me a parcel through your kind help. It was very kind of her, but I feel really distressed that your kindness should be so far taxed. I know how very fully your time is taken up on the journey, and I can only hope that you have not had to bestow any personal attention on my unfortunate package. I, who have done the journey, would never have dared to ask such a favour of you. I am so sorry that we shall not have even a momentary glimpse of you this time. We have gone through many rough experiences since this time last year, but we like the country and climate and are very happy to be settled here. I wish I had a persuasive pen and spirits equal to writing, I assure you I would do my best to prevail on all widowed mothers like myself, with the like limited means, to come to this healthy and hopeful country. But their sons must be as loving, steady and courageous as mine are. You have heard of their narrow escape with life last year. Well, thank God, they did escape, and are not a whit out of conceit with the climate. They are quite ready to stand up for their adopted country against any other. They are now busy early and late breaking, harrowing and seeding. We were too late last summer to do anything. They have also, under the guidance of an old servant of ours settled near, prepared a nice hot-bed where melons, watermelons, cucumbers, squashes, tomatoes, and various other vegetables are nearly ready for transplanting. So you see we are making our prairie home a cosy one. Not knowing your address I send this to the care of my kind friend Mr. Leggs. Excuse me for trespassing on your valuable time, dear Mr. Bridger, but I did want to thank you for your great kindness in bringing out the parcel. Messrs. Blackwood Bros, will take charge of it and forward it. The boys send you their very best regards, and I remain yours very sincerely.

The prairie is starred with lovely crocus clumps. I send you a blossom in case you have not seen any.

The following are extracts from further private letters of immigrants to Mr. Bridger, containing the impressions of the writers of the country. It should be remarked with respect to the rates of wages quoted that these fluctuate with circumstances and localities.

ALEXANDRIA, MANITOBA, Oct. 15, '83.

MY DEAR MR. BRIDGER:

I must now tell you how I have been getting on since I left you in Winnipeg. I came out here as you know with a letter of introduction from Mr. Fisher to a farm in this neighborhood, and got work the day after I arrived. I first had one month's engagement (\$15); the farmer I was with only wanted a man for a few weeks, to help him to get his spring crops in. During that month I had, I think, either five or six chances of long engagements, and accepted one of twelve months, \$15 a month, until the frost sets in, then \$8 during the winter when the country is frozen up, then start \$15 again whenever the frost breaks. I think it is pretty good, considering that I am quite without experience of the country.

I have been once into Winnipeg on business for the farmer I am living with, but there are very few of our fellow-passengers left there; the only ones I saw were Mr. and Mrs. Gibson; I spent an evening with them; they have settled down there and seem to like it very well. I forgot to mention another. I went up to the station the morning after I arrived there, to see if I could meet any old friends. When I got to the entrance I saw a gigantic form, head and shoulders above the crowd; you will easily guess who it turned out to be, our old friend Twyford. I was very glad to see him, as he and I had become very good friends. I only saw him for a few minutes, as he was just leaving Winnipeg. He has been very lucky. He had an engagement for three months, gardening, \$40 per month and everything found, and now he is working for the C. P. Railway Co., \$2 per day, and boarding himself. He likes the country very well, and you would hardly know him, he has grown so stout.

I like the country, my work and the people very much, and I am sure I shall never regret coming out here. I have already made some very nice friends. The summer here is very nice. I cannot yet give my opinion of the winter although we have already had a slight taste of it. A week ago we had a heavy fall of snow, and

very hard frost ; people were afraid that the winter was setting in, but I am glad to say that the snow has now disappeared, and I hope we will have some milder weather before the frost sets in.

With kindest regards, believe me,
Very truly yours,
W. CUNNINGHAM.

SOURIS P. O., MANITOBA, 2nd January, 1884.

MY DEAR MR. BRIDGER :

I am frequently meeting some one or other of the people who came out in your party when I did, and of course take a deep interest in them, enquiring about their past and prospects of the future ; I get varied replies ; some like and some dislike the country. Some have made a good deal of money, and sent for their families out ; some have returned to England ; others would not return upon any account. I know one family who were saving eight pounds per week after paying all expenses, and others doing equally as well. Nearly all are obliged to admit that they can make more money here in one year than in England in three or four, and if a man does not do so I think it is his own fault. I know some who left England some years ago, and would not go back to live upon any consideration, one in particular. He was sent to Canada by a subscription being raised in his village, had wife and child and only two pounds when he landed at Montreal. His father, grandfather and nearly all his relations, died in a workhouse, and he says that is where he would be now in all probability had he have remained in England. I have frequently called upon him, and can say he has now as good stock as any one, is in a comfortable position, and says he fears nothing in the way of living. I could mention many other such cases, and invariably find that those who came with little or no capital are the best off. Now, I have no hesitation in saying that for men who have families, also single men who have been brought up to hard work, by coming here would so much improve their circumstances that there would be no comparison between this and the r former homes. I often think of many a hard-working farmer and his family toiling from morn till night, and not able to pay his way, spending sleepless nights and miserable days, and many a steady industrious laborer struggling against poverty, and yet not awake to the fact that by coming here he could have a comfortable home free, a good farm and be the actual landlord.

The only objection I have is the long severe winter.

Believe me, my dear sir,

Yours very faithfully.

Rev. J. Bridger, St. Nicholas Church, Liverpool.

JOHN C. SIMPSON.

CANADIAN NORTH-WEST.

Manitoba and the Territories.

A SHORT SKETCH.

The territory now opened for settlement by the Canadian Pacific Railway and branches is of vast extent. It contains the largest area of unoccupied wheat-growing land in the world. The whole of this territory, including the old Provinces of Canada and British Columbia, has an extent about equal to that of the Continent of Europe, and a little larger than that of the whole of the United States, not including Alaska.

The richest known soils in the world are found in the Dominion of Canada; and those specially adapted to the growth of wheat in Manitoba and the North-West Territories. Wheat grown under the influence of the soil and climate of the Canadian North-West has special excellence. The Red Fyfe variety becomes hard and flinty and of great weight, often attaining to that of 65 lbs. the unshaken bushel, and sometimes more.

THE CANADIAN PACIFIC RAILWAY.

The attractions offered by these great areas of rich agricultural land have led to the most rapid and energetic railway construction hitherto known in the world. In 1881, Lord Lorne, the late Governor General, and his party travelled west over the plains to a point within sight of the Rocky Mountains, by slow daily stages, camping out every night to rest themselves and their horses. This was about two years and a-half ago (from the date of writing these lines). The railway track has now been laid to the summit of the first divide of the Rocky Mountains; in fact was so laid at the end of October last; the writer having then passed over it from Winnipeg to the summit. The most sanguine would not have dreamed even five years ago of such a result being obtained.

The length of line now laid from Winnipeg is 960 miles, and it is intended to push the work across the mountains during the present season.

On the heavy section through the mountains in British Columbia between Kamloops and Port Moody, where the tide water of the Pacific Ocean is reached, the track is laid 137 miles, and the whole of the 213 miles will probably have steel rails laid down during the summer of 1884.

During the past twelve months, 637 miles of railway were built by this company, and it is intended to finish the whole of the railway, that is, connecting the ocean navigation of the Atlantic on the east with that of the Pacific on the west, by the end of 1886. The mileage under traffic is now (July, 1884), 2,240 miles.

East of Winnipeg, the railway is open to Port Arthur on Lake Superior, a distance of 429 miles, and on sections still further east the rails are already laid from Montreal to Algoma Mills on the Georgian Bay, a distance of 539 miles.

As many as 18,000 men were at times employed on these works of railway construction during the summer of 1883; and an average of 3½ miles of railway track per day were laid.

This great railway line will not only be the shortest across the continent of America, but will have the easiest gradients and the lowest pass through the Rocky Mountains. Fortunately for the commerce of Canada "the Gate," of these mountains is found within its borders. The distance from San Francisco to New York by the Union Pacific Railway is 3,363 miles, while that from Port Moody to Montreal is only 2,830, or a difference of 633 miles in favour of the Canadian route. The Canadian line will shorten the passage from Liverpool to China in direct distance more than 1,000 miles. The favourable position of this railway, and the very great advantages which will arise in working it, as well from its passing through the fertile belt of the continent and its easy grades and curves, as from its geographical relations to the ocean trade of the west and east will, it is believed, give it a commanding influence upon the commerce of the continent.

SOIL AND PRODUCTIONS OF THE NORTH-WEST.

The very great wealth of the soil of Manitoba and large areas of the North-West is the chief attraction offered to the agricultural settler. This great wealth is shown, first, by the very large yields of wheat which reward even poor culture, the average established by statistics so far as being about twenty-five bushels to the acre, while careful cultivation has been known to bring forty bushels or even more. This is a much larger yield than is found in other parts of the continent of America. Manitoba and the Canadian North-West may be said to be as distinctly the wheat zone of North America, as Illinois and its sister states are the maize zone.

Barley gives also magnificent crops and the quality of the yield is very superior, the amount of the yield being like that of wheat, to a large extent dependent on

good methods of cultivation, and varying from twenty-five to forty bushels an acre.

Oats also thrive with wonderful luxuriance and yield very large crops, from fifty to seventy bushels an acre.

The soil is not less adapted to root crops of all kinds. Potatoes and turnips yield very heavily; cabbage and cauliflowers grow to a very large size; and all ordinary garden vegetables thrive with luxuriance. Tomatoes ripen, but are not always a certain crop. The fact of their ripening at all in the open air is, however, a favourable climatic test of great importance. Their ripening cannot be counted on in the United Kingdom.

Domestic animals of all the common varieties do well in Manitoba and the North-West. Near the Rocky Mountains large ranches of cattle are successfully carried on, the cattle staying out all winter; but in Manitoba and other parts of the North-West all cattle are housed in winter.

The cheapness with which barley and potatoes may be produced point to the *fattening of swine* as a profitable industry in Manitoba. These animals would also eat the under grades of unsaleable wheat, or siftings from any of the grains; and in their keeping it is to be observed that the prodigious quantities of straw which farmers now find troublesome to get rid of, and have to burn, might be, to a large extent, utilized. In wintering these animals, this straw would keep them warm without any very expensive building for the purpose of housing them, as a farmer might throw it over a frame of poles and thus secure the warmest possible kind of shelter for them; or pigs themselves would burrow in it, and so keep themselves clean and warm.

Where sheep have been tried they have done well and the breeding of these with care and adaptation to circumstances would be a profitable industry.

Neat cattle do well, and are easily fed in winter. The same remark applies to horses.

The greater cold of winter would soon suggest to the farmer the special adaptations as respects breeding necessary to meet it, and particularly with respect to the time at which the young of many of the animals should be brought forth.

CLIMATE.

The next and perhaps most important of considerations is the climate of the country to which a settler is about to go. In Manitoba and the North-West it may in general, be said that the summer is decidedly warm, and the winter decidedly cold. If the southern frontier of Manitoba were extended across the Atlantic ocean it would strike Europe in France, south of Paris. But what about the winters? Well, it has been said they are decidedly cold. Last winter (that of 1883-84) was on the whole exceptionally severe; yet for a week or ten days before these lines are being written (on April 18th) ploughing and seeding on a large scale had commenced in the Qu'Appelle District, on the line of the Pacific Railway, and there are accounts by telegraph of these operations going on in Manitoba. Now, nothing of the kind can be done over large portions of the north-east face of the continent of America, either in Canada or the United States. This fact may be set against a good deal of mere talking.

Cold as registered by the degrees of a thermometer is a relative term in so far as its effects upon the feelings are concerned. A damp atmosphere is more chilly and disagreeable at about the freezing point than a dry, bright cold at 20 degrees below zero, but 20 degrees below zero is not a fact to be simply ignored, and requires proper protection in dress and in buildings, as undue exposure without such protection must lead to frost bites of more or less serious consequences. With adequate protection, however, such as is the custom in the country, this degree, or even a lower one, is by no means unpleasant, and the general, in fact the almost universal, testimony of people who have lived in the North-West is that they like the weather, which is clearer, and brighter, and drier, better than that which is found on the eastern face of the continent.

The winter drawbacks are occasional storms, called in the language of the country "blizzards," from the blinding effects of snow in violent winds, and people who are not obliged do not choose days when "blizzards" are blowing to go travelling.

But these storms are not frequent; they are decided exceptions to the generally uniformly bright weather of the winter. It is to be remarked, too, that they are very much more violent in Minnesota and Dakota, and parts of the south-western States; where even in this more violent form they have not been found any bar to prosperous and successful settlement.

There is another drawback not special to Manitoba or the Canadian North-West, but common to a large portion of all this northern continent, and this is liability to late spring and early autumn frosts. For instance, a frost which came on the 7th September last, did great damage to a good deal of grain not quite ripe, in the Province of Manitoba. It did not destroy the grain so that it could not be manufactured into flour, but shrivelled the outer skin of the berry, and so lessened its value. This only happened to very late ripening wheat, as the harvest ought to be over, long before the 7th September.

It is to be remarked that this same frost destroyed a large portion of the tobacco crop in the subtropical State of Kentucky, did serious damage in Wisconsin, Dakota and Minnesota, and very much injured the fruit crop, particularly the grapes, over large portions of the Provinces of Ontario and Quebec, and the adjoining United States. Over a large portion of the continent, then, it was a disastrous damage, but liability to a damage of this sort, has not been a drawback which has stood in the way of the enormous development which has been witnessed over the portions of the continent referred to.

Mosquitos and a horse fly called the "Bull dog," are found to be a drawback by new comers; but people who have lived in the country think nothing of them; and they disappear to a very large extent with the progress of cultivation and settlement. Mosquitos, for instance, were the pests of the early settlers of the Ottawa Valley, but now they are not thought of.

Another possible drawback is the visitation of grasshoppers or locusts, but this is not particular to Manitoba, nor is that Province so liable to them as Minnesota and others of the Western States. They may not come in a generation. Senator Sutherland testified before a Parliamentary Committee that he had known perfect immunity from them for a period of forty years. The people of Manitoba and the States in the North West liable to this visitation do not, therefore, practically give the matter a thought.

In this little sketch, however, it is thought best to give the drawbacks, real or possible, the fullest prominence.

The testimony is universal that the climate of Manitoba is exceedingly healthy—in fact there is none healthier in the world. The fevers and agues which arise from malarial conditions prevailing in other parts of the continent, are unknown, and there are no endemic disease—that is, diseases which are natural to the country or belong to particular localities.

WEALTH OF THE SOIL.

Some specimens of Manitoba soil were furnished to Sir John Bennett Lewes and Mr. J. H. Gilbert, the result of whose observation at the experimental fields of Rothampstead, in England, recently attracted the attention of the scientific world. These gentlemen stated in a paper, read before the Chemical Section, at the meeting of the American Association for the Advancement of Science, held in Montreal in 1882, with respect to these specimens, that they were about "twice as rich in nitrogen as the average of the Rothampstead surface soils, and so far as can be judged, are probably twice as rich as the average arable soils in Great Britain."

"They, indeed, correspond in their amount of nitrogen very closely with the surface soils of our permanent pasture lands. As their nitrogen has its source in the accumulation from ages of natural vegetation, with little or no removal, it is to be supposed that, as a rule, there will not be a relative deficiency of the necessary mineral constituents. Surely, then, these new soils are mines as well as laboratories. If not, what is the meaning of the term, 'A fertile soil?'"

This statement from the highest authority is of the utmost importance, and it gives from a scientific point of view, the reason why we should naturally expect those large and luxuriant crops of which we hear in all accounts.

WATER AND FUEL.

Manitoba and the North-West, being in a depression of the continent, are on the whole well watered. They have a system of navigable rivers and lakes of immense extent, which of themselves form a remarkable feature of the continent, and there are numerous smaller rivers, lakes and coulees. On the plains, in many parts, and in all parts where the settler would take up land, water is easily obtained by digging wells to the depth of a few feet. In places where large supplies of water are required at a distance from the rivers, the principle of the Artesian well has been tried with more or less success. In some places, flowing wells of cold pure water have been easily obtained; in others, salt water has been struck, but the boring can be carried below this again, in such a way as to obtain fresh water in the tube. The experiments in Artesian wells, however, are yet far from exhaustive, and it has not been found that the practical farmer requires anything of this kind.

The supply of fuel is next in importance to that of water, and this, fortunately for the prosperity of that country, is found in illimitable quantities. The coal deposits in the Canadian North-West, from the lignites to the true coal, east of the Rocky Mountains under immense areas of fertile plains, are probably the largest in extent in the world. It is found by actual measurement and calculation that under a square mile of territory, there are 9,000,000 tons of coal, enough for the supply of a generation in the North-West; and yet there are hundreds of thousands of such square miles of coal! Whatever question there may be of the limited supplies of England, therefore, giving out, there can be none as respects these regions.

It is also to be observed that anthracite coal, so important, if not essential for many manufactures, has been found on the eastern slope of the Rocky Mountains, within a mile of the Canadian Pacific Railway. The importance of this discovery for the North-West is very great. It may be further observed, that on the Pacific coast both anthracite and bituminous coal are found contiguous to iron of the finest quality; and it is a fact that the bituminous coals of British Columbia are found by a test undertaken by the U. S. Government by officers of the navy, to be superior to those of the best coals on the Pacific coast of the United States for steam raising purposes, in the proportion represented by the figures 24 to 18. These are facts which point in the future to commercial and industrial supremacy; and this, in the near future, will have a marked influence in giving money value to the products of the plains.

Cord wood up to a recent date in Winnipeg has not been very much dearer for fuel than in the Eastern cities of Canada and the United States; with the exception, however, of a recent period, owing to a sudden influx of population with an unprepared means of supply. The bringing in of coal by the Pacific Railway last winter brought down prices; and there is reason to believe that henceforward fuel will be cheap throughout the North-West.

Straw is used with great economy and efficiency for the driving of steam engines for threshing out grain and other operations on farms; and stoves are being made to adapt its use for fuel for domestic purposes in those parts of the country where facilities for transport are more difficult.

TIMBER, MINERALS AND BUILDING MATERIALS.

On the slopes of the Rocky Mountains, and in the forest east of the plains, ample supplies of timber exist to last for generations. Lime is plentiful, and clay adapted to make brick both white and red of very superior quality, and capable of standing severe fire tests is found to occur over immense areas of the country. Valuable building stones are found in various places, but not generally in the prairie region. Petroleum is known to exist over immense areas, and will probably form in the future a large branch of commerce with the nations of the islands and shores of the Pacific ocean.

Gold, silver, iron and copper have been found, and there are doubtless other economic minerals of great value yet to be revealed for the use of mankind by mineral and geological explorers.

Three Years Ago and Now.

—0—
OBSERVATIONS BY MR. C. J. BRYDGES.
—0—

Mr. C. J. Brydges, the Land Commissioner of the Hudson's Bay Co., made an observation, the result of an extended tour in Manitoba and the N. W. Territory, three years ago. He has again done so during the month of July, 1884, and has furnished the following brief comparison of the two periods, showing a very remarkable progress. Mr. Brydges incidentally refers to some published expressions which had been made, in his opinion highly injurious, but really more misleading than injurious. His testimony, as follows, may be accepted with confidence:

"Three years ago, about this time, I drove from Winnipeg to Turtle Mountains, and then up to Brandon. From thence I drove on to Virden, and then to Fort Ellice on my way to Qu'Appelle. After getting away from Brandon a very few miles left behind us all trace of houses, shanties, or cultivation of any kind, and when we camped for the night at Gopher Creek (now Virden) there was nothing to be seen but the unbroken prairie, without the slightest sign of human life or cultivation. Going on the next day to Fort Ellice, the same complete absence of settlement was encountered for a distance of forty miles. This week I went by railway from Brandon to Elkhorn, and the entire distance was one continuous succession of farm-houses, barns, wheatfields and cultivation of all kinds, including a large amount of new ground, which has been broken this year to be covered with wheat fields next year. Virden, where I camped three years ago in a scene of silent desolation, is now a thriving village, with hotels, stores, billiard rooms, agricultural implement halls, and a large steam elevator at the station.

"Driving north from Virden and Elkhorn, a country 30 miles square, which three years ago was all virgin land, without a human being settled upon it, has now nearly every available homestead taken up and under actual settlement and cultivation. Fairly comfortable farm houses are everywhere to be seen surrounded by fields of wheat, barley, oats and potatoes. Almost every farm has one or two cows, a few pigs and fowls. In some places small herds, numbering from 5 to 20 head of cattle, are met with, and in two cases I saw herds of 100 and 200 head. In nearly every case, also, new land has been broken this year to put under crop next year. Such a change in three years is hardly consistent with the extraordinary farmers' resolution of last winter.

A SUCCESSFUL SETTLER.

"But as one of the uses made of those resolutions was to try and deter English farmers from coming to this country, it may be well if I give some account of a farm established by an Englishman on the banks of the Assiniboine River, about 18 miles north of Virden.

"Mr. H. M. Power came from Herefordshire in England to this country, early in 1882. After inspecting various parts of the country he finally decided to purchase five and a half sections, containing 3,520 acres from the C. P. R., on their then price with their rebate allowance for settlement. He entered upon the land in June, 1882, and broke some land that year. In 1883 he broke a large quantity. He began putting stock upon the farm in the fall of 1882. I will now describe what I found to be the condition of affairs after but little more than two years of work. I found 1,240 acres of wheat, in first rate condition, with a probable average yield of 25 bushels to the acre; 40 acres of barley, and 260 acres of oats. I drove round all the fields, and a finer growth of cereals it would be hard to find. The poorest crop is the oats, which appears to be the case wherever I have been. Potatoes, turnips, and other vegetables were all excellent crops. The wheat is beginning to turn yellow at the bottom, and it is expected that in about a fortnight harvesting will commence, and

that by the end of August nearly, if not quite, the whole crop will be safely gathered. All the land now under crop was plowed last fall. Seeding was begun on the 2nd of April, and the wheat was all sown by the first week in May. Two hundred and sixty acres in addition have been broken this year. They are now cutting and putting up 500 tons of hay for the use of the cattle next winter. There are nine houses and four barns now on the farm for the workmen, horses, etc., and it is intended to erect three or four more. There are now 203 head of cattle on the farm feeding in the valley of the Assiniboine, where there is magnificent pasturage, ample water, and shelter in the wood on the slopes. Seventy-six calves have been born during the last two years, and beginning with next year, there will be a good supply of three year old steers to the butchers. The cattle look remarkably well and the calves of this year, as also the yearlings and two-year-olds, are all large and strong. At each house broods of chickens are being raised. At present there are 38 pigs, sows and litters, which it is expected will increase to 100 at least by the fall.

"This is not a very bad record of growth in two years. But it is not all. Mr. Powers has a section of 640 acres near Moosomin, on which there are 125 acres with a fine crop of wheat, and 75 acres broken this year to put under crop next year. At the two farms on the Assiniboine, and at Moosomin, there will be a probable yield of about 34,000 bushels of wheat, which, deducting 6,000 bushels for seed for next year, will leave a probable quantity for sale of from 20,000 to 28,000 bushels, according as the yield actually turns out. Mr. Power also purchased seven sections, or nearly 5,000 acres, at Whitewood, where he has this year broken 1,000 acres to put under crop next year. He will thus have at the three places about 3,000 acres of land to put under crop next year. His land is all broken and backset before being sown, and is plowed in the fall, so as to be sown as early as possible in the spring. On these three farms there are 12 horses, 18 working oxen and 29 mules. It will be remembered that nine of Mr. Power's mules were stolen by Montana cow-boys not long ago. Any of that fraternity visiting his stables again will be supplied with a plentiful repast of cold lead.

"Last fall Mr. Power visited the country to the north, and was so impressed with its advantages that he purchased 11,000 acres, in fee simple, from the Manitoba North-Western Railway, and along its proposed line. At Russell he has broken this year 100 acres, and proposes to commence stock raising on a large scale by placing 300 head of cattle on the land he has purchased, to make a beginning with next year. Here, then, is the case of an Englishman who has not been frightened by the stupid resolutions passed at the farmers' meeting last winter, who is proving his faith in the country by increasing his investment in it, and who, humanly speaking, is now sure of a fair reward for the capital, energy and hard work which he has wisely and judiciously expended.

"Other similar cases, although not on so large a scale, could readily be brought forward. At Virden, close to the station, Messrs. Bouverie and Rutledge started in this year and have broken 550 acres, which they will backset this fall, and sow with wheat next spring. They have also started a small herd of cattle. Within sight of the station, close to where I camped three years ago, Mr. W. Stephen has built a comfortable house and barn, picturesquely placed in a grove of trees on the bank of Gopher creek. He has already broken a good deal of ground, and has a fine herd of about 100 head of cattle. South, in the direction of Pipestone creek, the land is thickly settled, and on every side are to be seen large fields of waving wheat, just beginning to turn under the powerful rays of the sun, and a large extent of newly broken ground to be put under crop next year.

"It is estimated that at Virden there will be about 200,000 bushels of wheat to sell this year, and at Elkhorn about 75,000 bushels. It is very earnestly to be hoped that there will be sufficient buyers come forward to deal with such quantities as these, supplemented by what will pour in for sale at other stations, and thus avoid a recurrence of last year's operations, which, by a practical monopoly, heavily reduced the price paid to the farmers.

"The facts stated are all important and encouraging, and if the results of the harvest prove as bright as the present indications point to, the celebrated resolutions of the farmers will, by the inexorable logic of events, be blotted out of recollection."

Alberta, Canada---Testimony of Settlers.

The following has been addressed to the Edinburg (Scotland) *Scotchman*.—
 Sir.—Having received numerous letters from parties in Great Britain desirous of obtaining some knowledge of a country which has only recently opened up, and of which many incorrect ideas have been entertained in years past, we, the undersigned residents, have thought it advisable to give a description of this country, and enumerate some of its many advantages as a field for emigration. Let it be clearly understood, however, that these are not the remarks of parties wishing to allure unsuspecting individuals from their homes for personal interests, but a setting forth of facts by men who have resided in the country for a considerable time, and are, therefore, capable of giving an opinion based on personal observations and experience.

Alberta is situated at the base of the Rocky Mountains, extending from the international boundary line to about the 54° north lat., and from the 112° west lon. to the summit of the Rockies. In this district are included hundred of miles of rolling prairie land, rich and fertile, terminating about twenty miles from the base of the mountains, where the country begins to assume a different aspect—the land now becomes of a broken nature, forming what are known as the foot hills. These are covered with splendid timber and intersected with numerous streams. The view from this point is grand, the mountains towering up to a tremendous height, with snow-capped peaks; the beautiful rivers and creeks, with their clear, icy-cold water and broken banks; the picturesque lakes, surrounded by trees, form a scene which equals, if it does not excel, any among the Alps.

The climate of Alberta is, we do not hesitate to assert, one of the finest in the world. The summers are warm; the winter weather is not nearly so severe as would be imagined, the influence of a warm southwesterly wind, termed chinook, having an ameliorating effect on the climate. True, the mercury drops occasionally to 35 degrees below zero, but the average temperature during the winter months is from 15 degs. to 30 degs. above zero. Alberta can boast more sunshine than any country in the same latitude. The air is peculiarly healthy and salubrious, and few who have spent a season here are willing to change it for any clime.

The pioneer settlers who have already ventured so far west have produced crops which cannot be excelled in Canada, cereals, vegetables, and root crops producing excellent yields. Wild fruits of various kinds grow luxuriantly throughout the country.

There are some forty thousand head of stock roaming at large over the prairies, owned by various ranchmen in this district, which are neither fed nor sheltered at any season. It has also been demonstrated beyond a doubt that the territory is second to none as a sheep country, and large flocks are expected here this season.

The mineral wealth of Alberta is enormous. Immense coal deposits are known to exist, and many of them are now being worked. Gold, both quartz and alluvial, silver, copper, and iron have been discovered in paying quantities, and thousands of men are preparing to flock to the mineral fields.

Calgary, the metropolis of this vast and fertile country, is beautifully situated in the valley of the Bow River. Two rivers wend their way through the valley, and a series of terraces form an amphitheatre, which makes the situation exceedingly attractive. The city is so placed geographically that it is the natural distributing centre for the entire country north and south, and for the mining camps in the mountains. Although but yet in its infancy, Calgary possesses business houses of no mean pretensions, carrying stocks replete with all articles necessary for wear or consumption; it also has railway and telegraphic communication, a public school, three churches, a weekly newspaper, and the many other requirements of a city. Its close proximity to the Pacific coast will also tend to enhance its importance as a business centre, and to capitalists and manufacturers it offers many inducements. There are hundreds of thousands of acres awaiting cultivation which will, we are assured, well repay all labour and capital expended upon them.

JOHN GLENN, Fish Creek.

S. W. SHAW, Fish Creek.

J. G. FITZGERALD, Calgary

WM. HUDSON, Calgary.

SIR RICHARD TEMPLE'S VIEWS.

GREAT FUTURE OF THE NORTH-WEST.

The following are portions taken from an address of Sir Richard Temple, the distinguished President of the British Association, delivered at Winnipeg September, 16th 1884, published in the *Winnipeg Times* :—

Now friends and fellow countrymen, I will give you my English impressions of your beautiful country. I propose to give you a categorical, but plain and practical account of it. You have during the last few days, heard its praises sung in grandiloquent terms, and I will not say they were not correct as you will find no expression which will go beyond the truth as to the greatness of this country. (Cheers) Perchance you have had an idea of that already in your mind, but perhaps you would like to learn why and wherefore it is so grand. I hope you will not be frightened at my list of subjects, as they are most important. The main heads are as follows: 1st, the excursion; 2nd, the land known as "The Lone Land" and now known as "the land of promise," 3rd, the scenery; 4th, the mineral resources; 5th, the prairie; 6th, the soil; 7th, agriculture; 8th, labour; 9th, the farms; 10th, the land; next, the climate, trees, towns, communication by land and water, the tariff, the condition of the people, emigration, and

THE FEELING IN ENGLAND

regarding the North-West of Canada. Now, my friends, I would have you remember that the excursion of the British Association was one of the largest, if not the longest, ever undertaken, and in that respect it was suitable to the great land in which it was made. The excursion was composed of one hundred gentlemen of more than ordinary education, and now that they have gone east, I will say what I would not say in their presence, that they are thoroughly accomplished, learned, scientific men. They went most thoroughly through the excursion and studied everything in the most complete manner, and, gentlemen, among them are many who carry weight at home, and whose opinions are listened to throughout England, and so you can judge, men of Winnipeg, whether it will not be a great aid to have this cloud of witnesses returning to England—men who have faith in the North-West and are able to give them a scientific reason for it. I know their report of your country will be favorable in the extreme.

They came with high anticipations, and those anticipations have been more than fulfilled. They are quite struck with admiration after all they have seen and all they have heard, and I am satisfied that evidence will be sufficient to you, well-wishers of Manitoba, in the highest degree. And though my brother excursionists were astonished at what they had seen, yet they had not seen all. They had visited the south section only, but I heard that the northern portion is still grander and richer. So you can realize what a great country it is, when such a body are struck with admiration when they have only seen half of it. What would have been their admiration when they had seen the glorious whole—the land in its integrity? Yet I have heard of it on authentic evidence, which is strengthened by what I have seen. The next point which I desire to discuss is the remarkable contrast between the country lately known as "the lone land" and now regarded as the "land of promise." It is only a few years since what are now the haunts of civilization, were the runs and wallowing-places of herds of buffaloes. Remember that the area of this country is vast. They have

an idea in England that this country is capable of containing one hundred millions of Anglo-Saxons. I don't know where they get those figures, but they are very possible figures in the not very remote future. If we consider the cultivable area of the Northwest, including Manitoba, we will find by computation that it is hardly less than one million square miles, or at the least three quarters of a million, and that being the case, if the population be 100 to the square—which is not a high ratio by any means—still that will give you 100 millions on a million square miles, or even if there be only three quarters of a million square miles, you will still arrive at a total nearly reaching 100,000,000. Well, gentlemen, this vast area can be fairly compared with the neighbouring States. In fact, the area of the Canadian Northwest is equal to the American States of Dakota, Iowa, Montana and Washington Territory, which are regarded among the most fertile parts of the Union. Those territories are regarded as constituting a land of promise and yet you have an equal area in the Northwest of Canada. I thus arrive, ladies and gentlemen, at my next heading and I will try and give you some idea of the vastness of the area and the probable increase of population. I will say something about the scenery. On the prairie we observe its vastness. There is beauty in mere immensity. It is a wonderful sight to see the sun rise and set on the very horizon of as it were a sea of prairie vegetation. The approach to the mountains from the prairie is the

MOST REMARKABLE IN THE WORLD.

I don't want to give you an exaggerated idea of their grandeur, or you will probably think they are the finest in the British Empire. But that empire is widespread (applause), and there are several larger mountains than the Rockies within its bounds. Nevertheless their appearance from the prairie is truly remarkable. They rise as masses of rock right out of the prairie, and are mostly covered with snow. The extent of these snow clad rocks is remarkable. Why, as we approached from the prairie, we saw 150 miles of continuous snow clad rock, constituting a magnificent sight. There is only one parallel to it in the world—the approach to the Caucasus from the steppes of Russia—but that is not so fine, as the mountains rise there

RANGE BY RANGE FROM THE LEVEL.

But here you see them all at once, and it is not so remarkable a sight in the Caucasus as in the Rockies, where the snow-clad rocks rise at once out of the prairie, covered with snow to the base. I must not attempt with so many economic topics before me to lead you into the scenery of these mountains. For the present I must confine myself to the remark that the effect of this scenery upon the minds of those who live in that region is very impressive. I believe the contemplation of this magnificent scenery, magnificent in extent at least, has an elevating effect on the Anglo-Saxon race; it enlarges the ideas, it brightens the imagination and it elevates the sentiments. In the short addresses received on the way there was

A LOFTINESS OF EXPRESSION.

almost amounting to grandiloquence to which I have hardly been accustomed in the addresses which I have received in other portions of the British Empire. These wonders were described to me as natural wonders—wonders of nature. To our British eyes, to our patriotic minds, the greatest of all wonders was this spectacle of Anglo-Saxon, British-Canadian enterprise spreading itself over the surface of this vast country and writing its marks in letters of flame upon the book of nature. I now come to the fourth heading of my list—that relating to the mineral resources of the country. Some of these resources we did not see, especially the iron ore, of which we saw specimens at the Historical exhibition in Winnipeg. We have seen something and heard much regarding the coal resources of the west. We believe there are coal mines within a short distance of the line of the Canadian Pacific Railway and we understand that there are

SOME FURTHER COAL RESOURCES

within a very moderate distance and some quite on the line—or within a hundred yards—of what may be called superior lignite, which when mixed with anthracite and bituminous coal, burns very well. I have every reason to hope that when these coal mines shall be worked and these great seams opened that you will be independent of Pittsburg and the United States, with respect to coal. I need only say that this is a great advantage to the people of this country. Further, we heard from some of the enterprising members of our party who penetrated into the mountains that there are considerable resources of great value. I must now say a few words, in the fifth place with regard to the prairie. Now, gentlemen, the prairie is fast becoming a thing of the past. In this it is following the example of the herds of buffaloes and the poor Indians who are receding before the face of the white man. When leaving Winnipeg we saw some prairie land that is

IN THE HANDS OF SPECULATORS

who are reserving it for future use. (Laughter). After passing this limit we saw no prairie at all for several hundreds of miles, until we crossed the Saskatchewan. What I mean is that we never passed a mile on the prairie plain without seeing a homestead or field or the marks of human occupation. We saw signs of culture from the speculators near Winnipeg up to within a few miles of the Saskatchewan River. It was only when we crossed the river that we saw the real plains. Even then it was only prairie in a modified sense. Instead of the homestead and the cultivated fields we saw capital ranches beginning to extend through the whole of the area from the Saskatchewan to the foot of the Rocky Mountains, which is in the hands of cattle raisers. Here again we saw signs of Anglo-Saxon progress in the shape of herds of cattle. The

VEGETATION OF THE PRAIRIE,

so far as we were able to see it in the intervals more or less of uncultivated land, is not remarkable, but still is rich. Some of the more enthusiastic of the party said it was the richest wild vegetation they had ever seen, but I think this was due to their enthusiasm, because the vegetation in the steppes of Russia is quite as rich, if not richer. Still the flora of this country is such as to promise an abundant return for agricultural labor. Everywhere or almost everywhere, we saw rich soil. Most of us expected to find tracks of arid waste, or if we saw rich soil it would be largely interspersed with specimens of gravel and rock, and the soil not suitable for cultivation. This idea proved entirely false, for I declare without exaggeration or reservation that through the whole country, from Winnipeg to the Rocky Mountains there is hardly a foot of ground which did not seem to be capable to be turned to human use. The extent of this country is 1,000 miles, and I say that we passed through one

UNBROKEN AREA OF USEABLE LAND,

viz., fertile land, capable of being turned to the use or advantage of any person. Then as regards the pasture, most of us who saw it are of the opinion that it is a splendid pasture and thoroughly suited for cattle—our only wonder was that we did not see sheep as well. The grass was not long but it was rich, thick and nutritious. The hay also in many parts was long and promised a rich reward to the hay cutter. The cattle generally seemed quite healthy, of very good breeds, many coming from the neighboring States of America, and apparently bred from the best of English stock. Sometimes complaints are heard in England concerning Canadian and American cattle dealers coming over to our country to purchase cattle, as they take away some of our best animals. We need not regret this fact because they only get them by paying a high price for them. The sale of these cattle is good for the cattle dealers in England as well as beneficial to you in this country. One thing you should try and prevent, and that is the spread of

THE CATTLE DISEASE.

It has broken out among cattle in various parts of the United States, and we have been painfully reminded of this fact in the old world. In Canada the disease has not yet broken out, but the people should take due precautions in order to prevent its importation. I speak feelingly upon the subject because among us in England we have failed to prevent the importation of the disease and the losses to British farmers from this cause have been simply incalculable. Now for heaven's sake profit by our example and learn from our misfortunes and losses, and preserve yourselves from a similar calamity. I have enquired a good deal as to ensilage, as this food for animals was becoming so fashionable in the United States and was being introduced into England, but I was told by farmers that no such food was necessary, because the supply furnished by nature was so very abundant. The next point I wish to take up is that of the crops, two kinds, cereals and roots. Cereals are grown on many farms exclusively; some of the greatest farms are wheat farms entirely, nevertheless in many instances we saw specimens or exhibits of the other products of the farm. The C. P. R. has set

A VERY EXCELLENT EXAMPLE

by having many model farms of this kind along the line of the Canadian Pacific in order to show what the country is capable of producing. In inspecting these we found nothing to equal the gigantic cabbages and monster cauliflowers shown here, yet we saw some good turnips, good potatoes, good beet roots, etc.

We heard in England that there would be great difficulty in growing wheat in this section of the country, viz, that your country is too high above the sea for the proper production of wheat. This is a falsehood and I can prove it by what I have seen. Wheat is produced well at 2,000 feet above the sea in that part of the country. At Calgary it is produced 3,000 above and at Panmore it is even more than 3,500. Consequently there is nothing in the altitude of the country to prevent wheat being

GROWN ON AN IMMENSE SCALE.

We enquired of the farmers regarding many things we have to do at home—namely rotation of crops, periodical manuring and weeding, but we were indignantly told that while these things might be very necessary in England they were not required here. They said they could not take the care to sow one crop on the land this year and a different one the next, but the same crops were grown for many successive years on the same land without injury. Manuring, they said was not necessary in this virgin soil; there is such richness in the soil, the subsoil and the soil beneath that crops grow without manuring. As to weeds, it was said there were none of consequence. Plowing also, we enquired about, and said we had to plough very deep in the old country, but we were told that nothing of the kind is needed here, but that you have

ONLY TO SCRATCH THE SOIL

and there is an abundant harvest. And, gentlemen, there is a great deal of truth in this, as the fact is you have a virgin soil. You have here entered upon an abundant inheritance. You have entered upon what may be called the geological period. Thousands of years look down upon your beautiful land. The result is that many of the Old World necessities, such as deep ploughing, manuring, weeding and the rotation of crops, can for a time be dispensed with here. The next thing I shall mention—I hope you will not be alarmed at the number of my subjects, but I have already got through eight—is that of labor. Labor, of course, is a great difficulty in the interior of the Northwest, but it has had this effect on the farmers, that it has compelled them to exercise their wits and employ

LABOR SAVING MACHINERY AND IMPLEMENTS.

These implements are among the most remarkable things to be seen in the land. Every kind of implement and machinery are to be seen at work, with all their rough sounding names—the scufflers, the harrowers, the reapers, the mowers, the threshers, and the like—there they are, all at work, and I must say, it is a most gratifying spectacle. I saw them at work in the fields, outside of the stores for sale, and in the factories being repaired. Truly the ingenuity of the farmers here is such as to make old countrymen first laugh and then grow envious. In England after reaping the grain the farmers have to stack it and then thresh it, but, gentlemen, the Northwest farmer does nothing of the kind. He brings his thresher to bear on the sheaves which have been already

ARRANGED TO HAND BY THE HARVESTER.

He then threshes the wheat or stores it in temporary wooden structures. He then allows the wheat to harden until the snow falls, and then draws it in his sledge over the hardened snow to the grain elevator at the edge of the railway. Then the railway carriages come underneath and the grain is shot into the cars and carried off for exportation. I think, gentlemen, if you thoroughly understand the rapidity of this, you will see that there is a great advance in the new over the old world. (Cheers.) The consequence of the application of all this labor saving is that the average area under cultivation per head is extra large. As you go through the country and see the great fields you naturally say there must be a great population, but such, as you are aware, is not the case. The average cultivation of acres per head is several times larger than in the old world. This is evident from the fact that every man has many acres at his command owing to improved machinery. My next subject relates to

THE FARMS.

I am aware that some are very great and mostly devoted to wheat, the unbroken fields extending over miles and miles of space. Yet we saw some smaller farms, some in what I believe, reckoned among the richest parts of the Northwest—those around Portage la Prairie. They are conducted by men who own them and work them themselves. We also observed the farm-houses—that they are well built, well aired and, I am told, well warmed in winter. And as to cottages—we asked for them; but really you do not have need of them, as there are so few men in such a low condition as to require them. You have but few labourers, but your agriculturists are what may be called peasant proprietors. Around the houses we saw evidence of market-gardening—which is a good sign. We observed that there is a

GOOD SUPPLY OF FUEL,

whereas we imagined such was not the case, as the prairies are regarded as simply composed of grass and vegetation; but scattered over it are many small scrub. The soil will also make excellent bricks and what is of great advantage to farmers, there are small limestones, scattered over the plain, from which lime for masonry can be obtained. (Applause). I now come to the land—the apportionment and division of the land. I will not conceal the fact that the land speculation has been unfavorable to you in the old country. We heard something of it in England, but more in Montreal, but my impression is that the story is greatly exaggerated. It is true that with your large land area the Government and you, as wise people, should provide for the future and not let the whole land get in the hands of corporations. In England, the socialists and communists are making much talk about large tracts of land being

IN THE HANDS OF PRIVATE INDIVIDUALS.

Well now, they will say, Canada is a young country with a future before it, and it should prevent any thing like that here. While the State should be generous in giving land to those who will use it and cultivate it, yet it should keep some in its

own hands until it can see what may happen in the generations to come. In that respect, the duty of Canada seems to be fairly performed in the past. (Cheers.) Why, gentlemen, some remarks have been made against the land concession to the C. P. R., but you must remember that without such a concession the road could not have been constructed—it was absolutely necessary to give the land in order that the project might be carried out. Then you will find that the whole land along the line has not been made over to the company, but only alternate blocks, the government reserving each other section. Then remarks have been made as to the disposal to a land company of a large portion of the C. P. R. grant, but you will find it is but

A SMALL PROPORTION OF THE WHOLE,

so that the railway has retained much in its own hands, and behind these concessions there is a vast amount at the disposal of the State to hold as it may foresee the wants of coming generations. (Cheers.) So I will feel bound to say in England, as I have said here, that no essential harm has been done by speculation or land concessions, and as regards any justice lurking under the remarks of the Socialists in England, that no immediate danger is to be apprehended in Canada. I say this in justice to the wise policy of the Government under which you are now living. (Cheers.) One of the objections urged in the old country against this country is that of the winter. The summers are well known. People in England are afraid of the supposed length, dreariness and wretchedness of the winter. Now I believe from our enquiry that this description of dreary and wretched winter is only in that portion of the country which lies underneath the Rocky Mountains and which under the

INFLUENCE OF THE CHINOOK WINDS,

is somewhat like the English winters, but apart from that as far as I could learn the winters in the rest of the country are rather bright and cheering. You have good, honest snowfalls which harden on the ground, with bright weather and a blue sky overhead. The snow is so hardened that it makes first-class communication. The people sleigh about, walk about and on the whole have a very cheerful time. In fact many of the old residents told me that the winter was the finest season here. (Great cheers.) I think this very important that if my description of your winter is at all correct—and from your kind applause I gather it is—then I say that it is important that this fact should be made known at home, for the impression that long and dreary winters prevail there is doing great harm to the cause of emigration. As regards the summer everybody says its too dry. If that is the case the drought may be mitigated by planting a lot of trees. The experience of every country in the world in every quarter of the globe, is, that when trees are swept away, there drought follows, and

WHEN TREES ARE PLANTED

there rains are vouchsafed in due season—the early and latter rains in their proper time. This universal experience would be satisfactory to you here. If farmers and settlers take precaution in planting trees in groves or patches along a stretch of avenues they will have the early and latter rains in due season. I must point out to you that if arboriculture is properly cared for the trees will grow. Poplar and maple trees are most suitable for the prairie country. In this western land the snow and frost is of great aid to the farmer. We have in England to sow in the autumn and the farmers have to look after our crops to a great extent all through the winter. Your farmers here have no such difficulty as this. All the sowing done here is in the spring: you have no autumn for this and here you have the advantage of us. The snow in the winter has prepared your ground and then the frost—the timely frost—has pulverized, it and rendered it suitable for the plow. All these things are a great advantage such as our brethren at home seldom enjoy. The last two or three winters we had little frost and the consequence is

ONE GREAT PULVERISING AGENCY HAS BEEN LOST,

an agency which you never fail to enjoy. At the meeting of the British Association

at Montreal, one of the Canadian professors read to us, on the whole, one of the most remarkable papers on tree planting I ever heard. He showed us how, with special reference to the Northwest, on every farm a grove of trees might be planted so as to catch all the breezes blowing from every quarter. He demonstrated how such tree planting would improve the climate and mitigate the severity of the winter, and would afford shelter in every way. He illustrated all this by carefully drawn diagrams. I do hope that the principles thus enforced by practical scientists will be adopted here. Tree planting is very useful, of course, up to a certain point of climate. You ought to try and preserve the primeval forest which still remains. On their arrival in Canada the members of the British Association were positively blinded with assurance that all Canada's forest was being rapidly destroyed and cut recklessly

WITHOUT ANY REGARD FOR THE FUTURE

and without any thought of reproduction. This is the universal testimony of all Canadians. I cannot, however, confirm this myself because the forests I have seen are poor ones such as between here and Lake Superior, which are a poor species of spruce and hardly worth anything. I understand there is a magnificent forest further to the North. In fact there must be, as is proven by the abundance of excellent timber to be seen in every market. I find a consensus of opinion among all Canadians that these forests are being used up without reference to future requirements. Among all the Canadians whom we met we learned that nothing has ever been done by any Legislature or Government for the preservation of the forests. I hope that there may be authorities present who will be able to contradict this report so made to us, but we, of course, cannot but accept the report received from competent witnesses in every quarter. If this is true, in common with all your friends, I will venture to utter a word of warning as to the result if this fatal policy be pursued. The forest is

AN EVER CONSUMABLE THING.

Like the herd of wild buffaloes disappearing before the white man it will infallibly disappear before the wood-cutter, if proper precaution be not taken. If time permitted I would give a few instances which I know of in other parts of the world of whole regions being destroyed by trees being cut away without the slightest regard to reproduction. I can hardly estimate the damage done. Suppose the trees continue to grow it would be fatally possible to cut them in such a manner that in a few years not any shall be left, so that future spectators would believe no trees had grown there. What makes that prairie? Was that made so by the hands of God? It was undoubtedly covered with forests or trees of a certain height. It is by constant fires, either received by the hand of man or by absolute cutting, but particularly by fire, that the plains, which were once clothed with timber as a sheep's back is clothed with fleece, are absolutely bare. If that be the case the people, in the future, should take thorough precaution. As a patriotic Englishman I

SPEAK FEELINGLY UPON THE SUBJECT

Recollect that I do not speak for the sake of England but for the sake of Canada. England, my friends, will never want for wood. You are aware that in Scandinavia, there is a vast area close along side of England, separated only by a narrow strip of sea, which is the most magnificent forest in the world. I recently travelled over the whole of Norway and I declare, that throughout that country there is an area of timber protected in a manner which met with my envy and admiration. There I could see no trace of fire. Everything is done methodically and scientifically. I saw the forest partly, and I saw the old forest and young forest growing up together. Everything was being provided for the use of the present and the prospects of the future. I am aware that Canada not only supplies your population with timber, but she also exports vast quantities to England. It would be a melancholy thing to see the Canadian lumber trade pass into the hands of Scandinavians owing to the neglect of the Canadian people themselves. If the forest in this Dominion is not taken better care of the people will

HAVE TO USE EXPENSIVE STONE

in many pursuits where they now use wood. I hope you will not be incensed at me making these remarks, but I am bound to tell you what I think and what every member of the association thinks. (Applause.) I shall lose no opportunity of impressing this as far as I can upon Canadian public opinion, and I have endeavoured to imperfectly fulfil that obligation to-night. I now come to notice the towns. We saw various towns and lost no opportunity of inspecting them, such as Portage la Prairie, Brandon, Qu'Appelle, Medicine Hat, Moose Jaw and Calgary, and I must also include Regina and Broadview, and I am bound to congratulate you heartily on the condition of these rising places. It is wonderful the manner in which they have sprung up, and are springing up now. We observed that the streets are well laid out, the houses clean, tidy and picturesquely situated—villas springing up in the neighborhood

SURROUNDED WITH GARDENS AND TREES.

We observed schools and churches and banks and other institutions. We saw also shops full of all the little paraphernalia of civilization and the stocks of agricultural machinery I have already described. Altogether, the condition of these places is most satisfactory, and everywhere we saw evidence of what may be called culture. And here let me take the opportunity of congratulating you on the exhibition at Winnipeg. (Cheers.) It was especially pleasing, as culture is a thing most likely to prove wanting in a young country. The way in which the exhibition was gotten up, the careful style in which the exhibits were arranged, I may say the scientific manner in which they were placed, is very creditable to the community and is culture in the true sense of the word. Indeed, I think the Association are to be congratulated that it was for them this exhibition was got up, and that for this reason if for no other they have been instrumental in doing good to you and themselves, and thus

MAKING THEIR VISIT MEMORABLE.

I must say a word about communication by land and water. It would be like gilding fine gold if I were to say a word of praise about the Canadian Pacific Railway. But I am anxious to press on your consideration that the C. P. R. is but the beginning of a vast railway system. It is the main artery from which may run veins into all directions. It is, I may say, the backbone of the body politic, from which the arms, the legs and toes are to come. As I have explained before

THE C. P. R. RUNS THROUGH A RICH COUNTRY,

but it is not the richest—there is a finer one to the north and to that region branches must go. It is said by many that the C. P. R. should have gone further north, but I believe those in charge took the wisest course; the main line should go as straight as an arrow from ocean to ocean. I have heard many remarks by farmers that railways are wanted to the south to connect with those pushing this way from the United States. These are matters of great and pressing importance. As to water communication, I am well aware that Canadian boatmen, celebrated in prose and poetry, are passing away before the advance of the iron horse, but I observe that steamboats are plying on the Assiniboine and Saskatchewan and even to Edmonton. All this is satisfactory, though I am compelled to say that river communication will not stand before the railway but where there are railways it is

NECESSARY TO HAVE WATER COMPETITION

which will have a beneficial tendency to keep down railway charges for freight. But gentlemen, what is still more important for you, men of Canada, is the truly grand project of the Hudson's Bay navigation. (Continued cheers.) I am aware a committee of experts is now sitting on the project and considering whether it is practicable. If it is declared practicable, well and good, but if not, then I will never abandon the hope that it will be found so by a future generation.